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ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

THIRTY-EIGHTH ACADEMIC YEAR.

1887-'88.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1887.

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GIFT
DEAN M. E. COOL
9-14-193✓

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845, by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10, of that year, under the name of the Naval School, with Commander Franklin Buchanan as Superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first and last were spent at the School, the intervening three being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the School, the students consisted of 36 Midshipmen, of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 Acting Midshipmen, appointed since September of the previous year. The Midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates, until the reorganization of the School, in 1850.

In September, 1849, a Board was appointed to revise the plan and regulations of the Naval School. The Board was composed of the following officers:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Uphur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the Board was approved, and went into operation July 1, 1850.

The new organization provided for a course of seven years, the first two and the last two at the School and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments, with executive heads, was fully adopted. It was provided that a Board of Visitors should make an annual inspection of the Academy, and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice-ship, and the annual practice-cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the Academic Board on the subject were referred to the Board of Examiners of the year 1851, composed of the following officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the Board of Examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea-service

the middle of the course, thus making the four years of study consecutive. The practice-cruise supplied the place of the omitted sea-service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the Board. The system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining Acting Midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In September, 1865, the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, all official connection with the Bureau came to an end.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of Acting Third Assistant Engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanism, chemistry, and mechanics, and practical exercises with the steam-engine and in the machine-shop. This class was graduated in June, 1868, together with two Cadet-Engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of Cadet-Engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for Cadet-Engineers was made four years instead of two; and the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of Cadet-Midshipmen or Cadet-Engineers at the Naval Academy, but in lieu thereof Naval Cadets shall be appointed from each Congressional district and at large, as now provided by law for Cadet-Midshipmen, and all the undergraduates at the Naval Academy shall thereafter be designated and called 'Naval Cadets'; and from those who successfully complete the six years' course appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps: *And provided further*, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year, such appointments to be made from the graduates of the year at the conclusion of their six years' course, in order of merit, as determined by the Academic Board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the Academic Board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year 1882. And if there be a surplus of graduates, those who did not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea-pay, as now provided by law for Cadet-Midshipmen; and so much of section 1521 of the Revised Statutes as is inconsistent herewith is hereby repealed."

"That any Cadet whose position in his class entitles him to be retained in the service, upon his own application, be honorably discharged at the end of four years' course at the Naval Academy, with a proper certificate of graduation."

SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command:

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Upshur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.

BOARD OF VISITORS, JUNE, 1887.

Commodore D. B. HARMONY, U. S. N., *President.*
Hon. GEORGE GRAY, U. S. Senate, *Vice-President.*

Hon. NELSON W. ALDRICH,	U. S. Senate.
Hon. HILARY A. HERBERT,	House of Representatives.
Hon. NATHAN GOFF,	House of Representatives.
Hon. JOSEPH D. SAYERS,	House of Representatives.
Hon. WILLIAM A. WALLACE,	Clearfield, Pa.
Hon. HENRY S. VAN EATON,	Woodville, Miss.
President D. C. GILMAN,	Johns Hopkins University.
Col. A. S. MORGAN,	Mount Holly, Ark.
THOMAS A. LOGAN, Esq.,	Cincinnati, Ohio.
Prof. W. G. SUMNER,	Yale College.

ACADEMIC CALENDAR.

1887-1888.

1887.

Oct. 1. Beginning of first term..... Saturday.

1888.

Jan. 23-28. Semi-annual examination Monday-Saturday.

Jan. 28. End of first term..... Saturday.

May 31. End of academic year, 1887-'88..... Thursday.

June 1-8. Annual examination Friday-Friday.

May 15. Examination of candidates for admission as Naval
Cadets..... Tuesday.

Sept. 1. Examination of candidates for admission as Naval
Cadets..... Saturday.

Oct. 1. Beginning of first term, 1888-'89..... Monday.

The academic months end on the following days:

1887-1888.

October	Oct. 29	February.....	Feb. 25
November.....	Nov. 26	March	Mar. 24
December	Dec. 24	April	Apr. 21
January.....	Jan. 21	May	May 26

1888-1889.

October	Oct. 27	December	Dec. 22
November.....	Nov. 24	January.....	Jan. 19

CALENDAR FOR 1887-1888.

SEPTEMBER.							MARCH.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
				1	2	3					1	2	3
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	....	25	26	27	28	29	30	31
OCTOBER.							APRIL.						
						1							
2	3	4	5	6	7	8	1	2	3	4	5	6	7
9	10	11	12	13	14	15	8	9	10	11	12	13	14
16	17	18	19	20	21	22	15	16	17	18	19	20	21
23	24	25	26	27	28	29	22	23	24	25	26	27	28
30	31	....	....	....	....	....	29	30	....	....	....	....	....
NOVEMBER.							MAY.						
		1	2	3	4	5			1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	....	....	....	27	28	29	30	31	....	....
DECEMBER.							JUNE.						
				1	2	3					1	2	
4	5	6	7	8	9	10	3	4	5	6	7	8	9
11	12	13	14	15	16	17	10	11	12	13	14	15	16
18	19	20	21	22	23	24	17	18	19	20	21	22	23
25	26	27	28	29	30	31	24	25	26	27	28	29	30
JANUARY.							SEPTEMBER.						
1	2	3	4	5	6	7	2	3	4	5	6	7	8
8	9	10	11	12	13	14	9	10	11	12	13	14	15
15	16	17	18	19	20	21	16	17	18	19	20	21	22
22	23	24	25	26	27	28	23	24	25	26	27	28	29
29	30	31	....	....	....	....	30	....	....	....	....	....	....
FEBRUARY.							OCTOBER.						
				1	2	3							
5	6	7	8	9	10	11	7	8	9	10	11	12	13
12	13	14	15	16	17	18	14	15	16	17	18	19	20
19	20	21	22	23	24	25	21	22	23	24	25	26	27
26	27	28	29	....	....	....	28	29	30	31	....	....	....

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,
COMMANDER W. T. SAMPSON.

Assistants to the Superintendent,
LIEUTENANT CHARLES BELKNAP.

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LIEUTENANT E. K. MOORE.

Commandant of Cadets,
COMMANDER P. F. HARRINGTON.

Assistants to the Commandant of Cadets,
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LIEUTENANT DAVID DANIELS,
LIEUTENANT J. T. SMITH.

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LIEUTENANT C. W. BARTLETT,
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12 OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

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ENSIGN F. J. HANSELER,
ENSIGN M. K. EYRE.

Sword-Master,

A. J. CORDESIER.

Assistant Sword-Masters,

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G. HEINTZ

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PASSSED ASSISTANT ENGINEER J. S. OGDEN,
ASSISTANT ENGINEER F. J. SCHILL,
ASSISTANT ENGINEER J. L. GOW,
ASSISTANT ENGINEER E. H. SCHINNER.

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LIEUTENANT J. M. ORCHARD,

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Assistants,

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PROFESSOR L. F. PRUD'HOMME, A. M.,

LIEUTENANT J. O. NICOLSON,

LIEUTENANT R. M. DOYLE,

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ASSISTANT PROFESSOR H. DALMON,

ASSISTANT PROFESSOR H. MARION.

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LIEUTENANT G. P. COLVOCORESSES,

PASSED ASSISTANT ENGINEER W. F. WORTHINGTON,

ASSISTANT PROFESSOR C. F. BLAUVELT.

14 OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

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Assistants,

SURGEON M. H. SIMONS, M. D.,

PASSED ASSISTANT SURGEON A. C. H. RUSSELL, M. D.,

PASSED ASSISTANT SURGEON J. D. GATEWOOD, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

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PASSED ASSISTANT SURGEON H. T. PERCY, M. D.

PAY INSPECTOR T. T. CASWELL, *Pay Officer.*

PAYMASTER J. P. LOOMIS, *Commissary and General Store-keeper.*

PASSED ASSISTANT PAYMASTER M. C. McDONALD, *Assistant to General Store-keeper.*

CHAPLAIN E. K. RAWSON.

ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*

J. J. GRAFF, *Assistant Librarian.*

R. M. CHASE, *Secretary.*

Attached to the Ships.

BOATSWAIN J. S. SINCLAIR,

GUNNER A. HARMAN,

CARPENTER G. W. COXOVER.

MATES.

Attached to the Nantux, the Wyoming, and the Phlox.

S. GEE,

J. HILL,

C. J. MURPHY,

R. G. PERRY,

J. ROGERS,

R. SILVER,

W. G. SMITH.

MARINE OFFICERS.

CAPTAIN H. A. BARTLETT, *Commanding Marines.*

CAPTAIN J. M. T. YOUNG,

FIRST LIEUTENANT G. T. BATES.

ACADEMIC BOARD.

THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF NEAMANSHIP, NAVAL TACTICS, AND NAVAL CONSTRUCTION.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

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L. H. CHANDLER.****CADET-MASTERS.****H. K. BENHAM,
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C. L. A. INGATE.****CADET-ENSIGNS.****W. M. CROSE,
D. W. BESWICK,****A. L. NORTON,
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C. B. MORGAN,
M. L. MILLER,****E. E. WEST,
E. K. COLE,
J. F. HUBBARD,
J. H. REID,****L. A. STAFFORD,
W. B. FRANKLIN,
H. A. WILEY,
T. P. KANE.***Cadet-petty-officers of the second class.***G. H. ROCK,
B. F. HUTCHISON,
S. E. KITTELLE,
B. S. NEUMANN,****J. B. PATTON,
A. B. HOFF,
N. C. TWINING,
G. L. FERMIER.****C. G. LONG,
G. R. MARVELL,
L. R. DE STEIGUER,
W. D. MACDOUGALL.**

SUMMER CRUISE, 1887.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE-SHIP CONSTELLATION.

COMMANDER C. L. HUNTINGTON, *Commanding.*
LIEUTENANT E. H. C. LEUTZE, *Executive Officer.*
LIEUTENANT R. MITCHELL, *Navigator.*
LIEUTENANT J. M. ROPER, *Watch Officer.*
ENSIGN J. H. GLENNON, *Instructor in Navigation.*
ENSIGN H. L. P. HUSE, *Watch Officer.*
ENSIGN J. B. BLISH, *Watch Officer.*
ENSIGN S. MORGAN, *Watch Officer.*
ENSIGN M. K. EYRE, *Watch Officer.*
SURGEON M. H. SIMONS.
PASSED ASSISTANT SURGEON R. ASHBRIDGE.
ASSISTANT PAYMASTER G. W. SIMPSON.
CHAPLAIN E. K. RAWSON.

NAVAL CADETS.

First Class.

Aiken,	Gates,	Morgan,
Anderson, L. J.	Hartrath,	Norton, A. L.
Barnett,	Hayward,	Quinby,
Beach,	Hubbard,	Reid,
Benham,	Hughes,	Robertson, A. H.
Beswick,	Ingate,	Robison, S. S.
Brittain,	Kane,	Stafford,
Chandler,	Korster,	Stickney,
Cole, E. K.	Lejeune,	Vauant,
Cramer,	Marble,	Wilbur,
Croce,	Miller,	Wiley,
Franklin,	Monroe,	

Third Class.

Bailey,	Chase,	Everhart,
Ballechmider,	Coleman,	Gartley,
Blankenship,	Coulson,	Gibbs,
Bond,	Davis, C.	Holland,
Bostwick,	Dayton,	Holmes,
Bock,	Dinges,	Horne,
Buttler,	Dismukes,	Kochersperger,
Catlin, A. W.	Eaton,	Lang,

Third Class—Continued.

Latimer,	Radford,	Snow,
McDonald,	Rano,	Soule,
McVay,	Rising,	Spear,
Moffett,	Ritter,	Sullivan,
Moses,	Ruhm,	Taylor,
Neville,	Ryan, E. D.	Treadwell,
Norton, W. S.	Ryan, J. P. J.	Vogelgesang,
Okell,	Saunders,	White,
Perry,	Schofield,	Williams, G. W.
Price.	Signor,	Ziegemeier,

Fourth Class.

Allen, C.	Lancaster,	Nire,
Althouse,	Lane,	Pollock,
Anthon,	Laws,	Robinson, R.
Blamer,	Leeds,	Robison, J. K
Carter,	Leonard,	Senn,
Christy,	Low,	Smith, H. E.
Consaul,	Magill,	Smith, L. G.
Emrich,	McGrann,	Theall,
Gross,	McKelvy,	Todd,
Jenkins,	McLemore,	Trickle,
Jewell,	Maurin,	Waller,
Kellogg,	Ninde,	

NAVAL CADETS ON BOARD THE UNITED STATES SHIP SANTÉE, RETAINED AT THE ACADEMY FOR MACHINE-SHOP AND OTHER PRACTICAL INSTRUCTION.

Second Class.

Anderson, E. B.	Kaiser,	Patton,
Bradshaw,	Kittelle,	Phelps,
Brand,	Kirk,	Pratt,
Cole, W. C.	Lewis,	Prochazka,
Danforth,	Long,	Raymond,
Driggs,	Lowndes,	Rock,
Dutton,	Lucas,	Seymour,
Fermier,	Marvell,	Steiguer,
Fuller,	MacDougall,	Terhune,
Gaines,	Mendell,	Thomas,
Harrison,	Mitchell,	Twining,
Hobson,	Neumann,	Williams, P.
Hoff,	Nulton,	Woodward.
Hutchison,	Offley,	

SUMMARY.

On board United States practice-ship <i>Constellation</i>	124
On board United States ship <i>Santée</i>	41
Total	165

SYNOPSIS OF THE CRUISE.

CONSTELLATION.

Commissioned May 14, 1887. Cadets embarked June 13.

Sailed from Annapolis June 15; went to sea June 27.

Arrived at New London, Conn., July 3.

Cruised in Long Island Sound between New London, Conn., and Newport, R. I., and in Gardiner's Bay till August 12.

Inspected by Naval Board of Inspection at New London, Conn., July 25 and 26.

Arrived at Hampton Roads August 17.

Reached Annapolis August 27.

Cadets disembarked August 28.

RELATIVE STANDING OF NAVAL CADETS AT THE ANNUAL EXAMINATION, JUNE, 1887.

P denotes physically disqualified for the naval service.
† Found deficient, allowed a re-examination, passed, and continued with class.
†† Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.
§ Found deficient, and recommended to be dropped.
a denotes absence from examination.

Class of naval cadets appointed 1882, performing required service afloat.

Order of merit.	Name.	State from which appointed.	Date of admission.
*1	Kress, Frederick Norton	New York	Oct. 3, 1882
2	Breed, George	Kentucky	June 17, 1882
3	Bullard, William Hannum Grubb	Pennsylvania	Sept. 28, 1882
4	Edgar, Webster Appleton	New York	Sept. 22, 1881
5	Oman, Joseph Wallace	Pennsylvania	June 17, 1882
6	Dodd, Willard Louis	Indiana	Sept. 28, 1882
7	Fonst, William Harry	Ohio	Sept. 28, 1882
8	Andrews, Phillip	New Jersey	Sept. 28, 1882
9	Caldwell, William Howell	Tennessee	Sept. 28, 1882
10	Tiedale, Ryland Dillard	Kentucky	Sept. 28, 1882
11	Strite, Samuel Melchoir	Maryland	Sept. 28, 1882
12	Jenkins, Friend William	Pennsylvania	Sept. 28, 1882
13	Levis, Francis Adelbert	New York	June 17, 1882
14	Hines, Harold Kemble	Kentucky	Oct. 2, 1882
15	Cooper, George Franklin	Georgia	June 17, 1882
16	Rumsey, Harry Edgerton	Wyoming	Sept. 28, 1882
17	Witherspoon, Edwin Taylor	Connecticut	Sept. 28, 1882
18	Johnson, Edwin Van Dusen	Indiana	June 17, 1882
19	Hawk, George Frederick	Pennsylvania	June 17, 1882
20	Griswold, John Noble	Wisconsin	Sept. 30, 1882
21	McMillan, John Taylor	California	June 17, 1882
22	Billings, Cornelius Canfield	Vermont	Sept. 28, 1882
23	Winram, Samuel Black	Missouri	June 17, 1882
24	Berry, John Giveen	Maine	June 17, 1882
25	Young, David May	Virginia	Sept. 30, 1882

Class appointed 1883, 44 members.

Order of general merit.	Name.	State.	Date of admission.
*1	Stocker, Robert	Minnesota	Sept. 4, 1883
*2	Hibbs, Frank Warren	Minnesota	Sept. 4, 1883
*3	Snow, Elliot	Utah Territory	Sept. 4, 1883
4	Decker, Benton Clark	Illinois	May 17, 1883
5	Bristol, Mark Lambert	New Jersey	May 19, 1883
6	Wells, Benjamin Warner, jr	Illinois	May 17, 1883
7	McCully, Newton Alexander, jr	South Carolina	May 19, 1883
8	Burke, Walter Rafford	Illinois	May 17, 1883
9	Cloke, William Snelling	New Jersey	May 17, 1883
10	Stearns, Ben Wade	Iowa	May 17, 1883
11	Bertolette, Levi Calvin	Delaware	Sept. 4, 1883
12	Hurlbut, Samuel Ray	Connecticut	Sept. 4, 1883
13	Moale, Edward, jr	Montana	June 17, 1882
14	Bryan, Henry Francis	Ohio	May 2, 1883
15	McMillan, William Graham	North Carolina	Sept. 4, 1883
16	Durrell, Edward Hovey	Massachusetts	May 17, 1883
17	Logan, George Wood	Ohio	Sept. 2, 1883
18	Long, Andrew Theodore	North Carolina	May 17, 1883
19	Brown, Ford Hopkins	Iowa	May 17, 1883
20	Peckham, Henry Lincoln	Rhode Island	May 17, 1883
21	Washington, Thomas	North Carolina	May 17, 1883
22	Neale, Archibald Henderson	North Carolina	May 19, 1883
23	Stone, Clarence Morton	Indiana	Sept. 25, 1883
24	Churchill, Creighton	Missouri	Sept. 4, 1883
25	Davis, Archibald Hilliard	North Carolina	May 17, 1883
26	Johnston, Charles Ernest	Ohio	May 17, 1883
27	Draper, Herbert Lemuel	Kansas	Sept. 6, 1883
28	Boughter, Francis	Pennsylvania	May 17, 1883
29	Bliss, Victor	South Carolina	Sept. 6, 1883
30	Pigott, Michael Rowton	Massachusetts	Sept. 20, 1883
31	Edmonds, Samuel Preston	Missouri	May 19, 1883
32	Barrage, Guy Hamilton	Massachusetts	Sept. 6, 1883
33	Russell, Frank Mead	Pennsylvania	May 19, 1883
34	Coleman, Ross	California	May 17, 1883
35	Allen, Henry Asa	Wisconsin	Sept. 4, 1883
36	Jackson, Richard Harrison	Alabama	June 4, 1883
37	Swanstrom, Frederick Emil	Minnesota	Sept. 6, 1883
38	Cochran, Claude Stanley	Ohio	Sept. 4, 1883
39	Ballinger, James Grey	Kansas	Sept. 6, 1883
40	Craig, Colin Samuel	Iowa	May 17, 1883
41	Hudson, Charles Edward	Arkansas	Sept. 4, 1883
42	Mosley, William Branch	Texas	Sept. 6, 1883
43	Young, Louis le Sautier	Louisiana	Sept. 6, 1883
44	O'Halloran, Thomas Michael	Pennsylvania	May 17, 1883

performing required service afloat.

Age at date of admission.		Order of merit.								Sea service in practice ships.		Order of general merit.
Years.	Months.	Astronomy, navigation, and surveying.	Least squares and strength of materials.	Ordnance and gunnery.	Seamanabip, ship-building, and naval tactics.	Practical instruction in steam engineering.	Physiology and hygiene.	Conduct.	Number of demerits.	Months.	Days.	
17	7	1	1	1	2	4	14	1	0	4	29	*1
15	10	4	3	2	3	2	4	5	2	4	29	*2
17	2	5	5	5	7	1	7	4	1	4	29	*3
15	4	7	6	3	6	2	12	15	12	7	11	4
15	1	8	2	8	1	25	11	38	56	7	11	5
15	4	9	10	11	5	9	5	24	21	7	11	6
15	11	6	7	10	9	24	15	10	6	7	11	7
16	4	11	9	14	12	16	6	11	7	7	11	8
17	3	12	4	8	19	14	12	29	30	7	11	9
15	0	2	12	9	16	14	22	7	5	7	11	10
17	2	7	16	13	11	8	10	30	32	4	29	11
16	10	18	7	7	33	40	30	26	25	4	29	12
15	8	14	10	16	4	16	9	12	9	9	17	13
18	0	17	24	22	24	6	19	35	39	7	11	14
17	6	28	29	19	16	16	19	19	13	4	29	15
17	8	26	34	27	16	4	1	22	16	7	11	16
14	10	10	15	15	27	16	32	32	33	4	29	17
17	1	15	16	17	8	30	15	15	12	7	11	18
16	6	18	18	6	21	22	23	7	5	7	11	19
17	10	24	13	24	10	7	3	15	12	7	11	20
18	0	30	27	24	33	30	36	1	0	7	11	21
15	1	27	28	18	29	33	32	15	12	7	11	22
16	11	19	22	21	13	10	35	25	23	4	29	23
17	0	21	19	11	15	16	7	12	9	4	29	24
16	8	30	35	28	21	10	28	14	10	6	26	25
17	2	32	41	34	42	25	28	19	13	7	11	26
16	8	37	38	39	19	33	15	27	27	4	29	27
14	4	15	14	20	13	42	21	41	61	7	11	28
17	9	22	23	30	38	32	24	5	2	4	29	29
17	7	39	44	43	43	36	2	38	56	4	29	30
15	9	20	36	22	33	25	39	27	27	7	11	31
16	2	34	20	26	24	22	42	1	0	4	29	32
17	4	28	26	29	23	36	15	7	5	7	11	33
15	10	36	39	32	31	29	25	34	38	3	25	34
16	7	39	24	36	37	25	32	33	35	4	29	35
17	0	35	32	33	38	12	25	19	13	7	11	36
16	10	33	40	35	24	12	37	35	30	4	29	37
17	10	24	36	36	33	41	42	30	32	4	29	38
16	2	23	43	31	41	36	30	48	92	4	29	39
17	1	44	30	36	31	36	25	40	59	7	11	40
16	10	39	31	41	29	16	40	23	18	4	29	41
16	9	42	42	44	43	33	41	42	71	4	29	42
17	10	42	21	42	28	44	42	37	52	4	29	43
16	4	38	32	40	40	43	38	44	107	7		

First class—

Order of annual merit.	Name.	State.	Date of admission.
24	Alken, Samuel James	Tennessee	Sept. 4, 1884
25	Anderson, Louis Joseph	Georgia	May 27, 1884
24	Bassett, Frederick Brewster, jr	New York	May 19, 1884
1	Baya, William Peter	Florida	May 20, 1884
28	Beach, Edward Latimer	Minnesota	May 20, 1884
11	Benham, Henry Kennedy	New York	May 19, 1884
14	Beswick, Delworth Wilson	Michigan	May 20, 1884
7	Brittain, Carlo Bonaparte	Kentucky	May 20, 1884
18	Chandler, Lloyd Horwitz	New Hampshire	Sept. 4, 1884
(d)	Cole, Eli Kelley	New York	Sept. 4, 1883
217	Closs, Hiram Benjamin	Texas	May 22, 1884
20	Cramer, Stuart Warren	Illinois	Sept. 4, 1884
13	Cross, William Michael	Indiana	May 19, 1884
26	Franklin, William Buell	Maryland	May 20, 1884
30	Gates, Herbert Grenville	Michigan	Sept. 4, 1884
16	Hartrath, Armin	Michigan	Sept. 4, 1884
6	Hayward, George North	New York	May 19, 1884
20	Hubbard, John Flavel	New York	Sept. 5, 1884
19	Hughea, Charles Frederic	Maine	Sept. 6, 1884
4	Hull, Robert Carter	At large	May 20, 1884
27	Ingata, Clarence Louis Adrian	Alabama	May 20, 1884
23	Kane, Theodore Porter	New York	May 19, 1884
12	Keester, Oscar William	Pennsylvania	Apr. 5, 1884
15	Lejeune, John Archer	Louisiana	May 19, 1884
23	Marble, Frank	New York	Sept. 4, 1884
8	Miller, Marcus Lyon	Massachusetts	Sept. 4, 1884
1	Moore, Moore Daniel	New York	May 19, 1884
5	Morgan, Casey Bruce	Mississippi	Sept. 4, 1884
22	Norton, Albert Leland	Ohio	May 22, 1884
25	Quinby, Edwin Rufus	New York	May 22, 1884
21	Reid, James Henry	Virginia	Sept. 4, 1884
4	Robertson, Ashley Herman	Illinois	Sept. 4, 1884
10	Robison, Samuel Shelburn	Pennsylvania	Sept. 4, 1884
23	Stafford, Leroy Augustus	Louisiana	Sept. 15, 1884
22	Stickney, Herman Oeman	Kentucky	Sept. 4, 1884
21	Vannant, William Newton	Pennsylvania	Sept. 4, 1884
9	West, Ernest Edward	Georgia	May 22, 1884
23	Wilbur, Curtis Dwight	Dakota	May 19, 1884
21	Wiley, Henry Aristo	Texas	May 17, 1884

c See page 25.
d Turned back from class appointed 1883

37 members.

Age at date of admission.		Order of merit.							Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.		Months.	Days.	
17	7	24	14	20	26	22	24	9	37	5	8	24
17	10	26	24	18	22	26	23	24	69	7	20	25
15	4	29	33	27	34	34	34	27	81	7	20	34
15	6	18	30	38	38	38	38	12	40	5	5	†
16	10	27	14	24	26	32	31	8	36	7	20	28
16	9	30	27	11	5	12	18	21	57	7	20	11
15	8	13	14	22	18	14	17	7	27	7	20	14
17	4	24	6	12	11	17	8	19	48	7	20	7
15	0	8	11	30	25	12	19	4	21	5	8	18
16	0	(a)	(a)	(a)	(a)	(a)	(a)	.....	.....	7	14	(d)
17	8	16	34	21	9	4	15	32	147	5	5	17
16	5	6	25	35	29	27	31	20	51	5	8	29
17	3	4	4	23	14	19	11	22	59	7	20	13
16	3	10	22	37	23	27	26	2	13	7	20	26
17	4	20	12	36	33	20	30	17	47	5	8	30
16	0	26	2	10	13	5	14	38	193	5	8	16
17	11	11	17	8	3	9	7	35	181	7	20	6
17	2	27	13	19	6	10	20	33	156	5	8	20
17	10	21	20	34	15	24	11	11	38	5	8	19
14	7	36	37	16	17	34	37	34	176	5	5	5
16	4	12	26	25	29	23	22	28	84	7	20	27
15	2	22	35	26	36	27	27	30	114	7	20	33
17	10	30	17	9	19	30	6	26	76	7	20	12
17	4	33	17	15	20	14	16	16	44	7	20	15
17	0	2	9	2	4	2	2	14	42	5	8	*2
17	11	14	20	13	8	17	10	15	43	5	8	8
17	7	25	30	27	36	36	36	31	134	7	20	†
16	10	5	3	6	7	8	4	29	105	5	8	5
17	11	7	6	32	29	25	20	3	19	7	20	22
14	9	38	38	31	28	37	35	37	184	7	20	35
14	9	19	29	7	32	20	25	5	25	5	8	21
10	8	3	9	5	10	6	4	6	26	5	8	4
17	3	15	8	14	16	14	11	23	66	5	8	10
14	9	23	32	3	21	7	27	36	182	5	8	23
16	8	9	35	32	34	33	31	13	41	5	8	32
15	6	1	1	1	1	1	1	17	47	5	8	*1
16	10	16	28	17	12	10	9	9	37	5	5	9
17	5	32	4	3	2	3	3	1	11	6	20	*3
16	3	35	23	27	24	30	29	25	74	7	9	31

Order of annual merit.

	Name.	State.	Date of admission.
1	Anderson, Ernest Bentley	Kentucky	May 22, 1885
28	Bradshaw, George Brown	Texas	Sept. 4, 1885
31	Brand, Charles Augustine	Connecticut	Sept. 8, 1885
37	Carney, Robert Ernest	Wisconsin	May 21, 1885
18	Cole, William Carey	Illinois	Sept. 5, 1885
12	Danforth, George Washington	Missouri	Sept. 7, 1885
40	Driggs, Louis Labadie	Nebraska	Sept. 28, 1885
32	Dutton, Robert McMillan	California	Sept. 4, 1885
5	Emerson, Selden	Kansas	May 22, 1885
24	Fernier, George Lucien	Indiana	May 21, 1885
23	Fuller, Ben Hebard	Michigan	May 22, 1885
27	Galnea, Edward	Missouri	May 21, 1885
1	Harrison, William Kelley	Texas	May 23, 1885
3	Hobson, Richmond Pearson	Alabama	May 21, 1885
1	Hoff, Arthur Bainbridge	At large	Sept. 28, 1885
5	Hutchison, Benjamin Franklin	Missouri	Sept. 5, 1885
5	Johns, Vandyke	Maryland	Sept. 23, 1885
5	Johnson, Sydney Smith	Texas	Sept. 7, 1885
17	Kaiser, Louis Anthony	Illinois	May 20, 1885
20	Kirk, George William	Missouri	Sept. 7, 1885
7	Kittelle, Sumner Ely	New York	May 19, 1885
20	Lewis, Frederick Nelson	New York	May 22, 1885
9	Long, Charles Grant	Massachusetts	Sept. 7, 1885
16	Lowndes, Edward Rutledge	Michigan	Sept. 29, 1885
11	Lucas, Lewis Clarke	Ohio	Sept. 9, 1885
13	MacDougall, William Dugald	New York	May 19, 1885
19	Magruder, Thomas Pickett	Mississippi	Sept. 3, 1885
6	Marvell, George Ralph	Massachusetts	Sept. 7, 1885
20	Mendell, George Henry, jr.	California	Sept. 5, 1885
20	Mitchell, George Grant	Indiana	Sept. 7, 1885
5	Montgomery, Wallace Blount	Alabama	Sept. 5, 1885
14	Neumann, Bertram Stansbury	New Jersey	May 22, 1885
10	Nulton, Louis McCoy	Virginia	Sept. 8, 1885
13	Offey, Cleland Nelson	Indiana	Sept. 5, 1885
20	Patton, John Bryson	South Carolina	May 21, 1885
23	Phelps, William Woodward	Maryland	May 19, 1885
8	Pratt, William Veasey	Maine	Sept. 9, 1885
1	Preston, Charles Francis	Maryland	Sept. 4, 1885
41	Prechaska, Julius	Wisconsin	Sept. 7, 1885
11	Raymond, William Wile	Massachusetts	Sept. 7, 1885
2	Reck, George Henry	Michigan	May 20, 1885
20	Reynour, William Henry	Alabama	May 27, 1885
24	Reigner, Louis Rudolph de	Ohio	Mar. 17, 1885
21	Torhase, Warren Jay	New Jersey	May 19, 1885
22	Thomas, Cully Fleming	Tennessee	May 21, 1885

42 members.

Age at date of admission.		Order of merit.							Sea service in practice ships.		
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Number of demerits.	Months.	Days.	Order of annual merit.
16	8	42	45	43	44	46	25	88	5	10	†
15	4	13	23	31	17	40	44	186	2	17	28
17	4	25	38	28	16	25	26	146	2	17	31
16	5	38	18	36	15	35	40	170	4	19	37
17	1	16	11	10	25	38	34	138	2	17	18
17	7	18	7	12	19	22	10	44	2	17	12
17	1	42	37	16	38	30	44	186	2	17	40
15	10	35	27	20	36	10	39	154	2	17	32
17	10	50	50	41	46	32	33	130	4	17	5
17	2	32	38	47	44	13	14	50	4	17	34
15	3	25	29	30	23	9	40	170	4	17	23
17	6	24	32	32	34	33	20	82	4	17	27
14	10	41	47	38	32	30	18	81	5	10	†
14	9	2	6	4	4	24	10	44	5	10	3
15	9	3	1	1	1	10	4	31	1	8	1
17	7	5	4	5	2	33	13	47	2	17	5
17	7	49	44	26	32	41	10	44	2	17	5
17	2	47	38	35	43	49	31	123	2	17	5
15	1	11	26	26	22	29	27	111	5	10	17
17	1	29	36	21	38	22	24	86	2	17	29
17	11	20	12	3	8	4	5	33	5	10	7
17	1	36	43	33	24	43	28	112	4	8	39
15	9	12	20	17	6	14	3	24	2	17	9
17	8	8	16	38	47	1	48	224	2	17	16
17	10	14	22	13	11	7	23	84	2	17	11
16	11	33	8	14	9	5	17	64	5	10	13
17	10	17	9	18	14	25	46	196	2	17	19
16	0	4	24	34	42	2	1	14	2	17	6
17	1	34	34	19	10	42	26	97	2	17	30
16	0	25	30	48	20	15	18	81	2	17	26
17	10	42	49	49	50	44	9	41	2	17	5
17	7	23	13	28	30	5	7	39	5	10	14
16	1	14	14	25	13	3	5	38	2	17	10
16	3	20	18	36	17	17	8	40	2	17	15
17	11	9	14	45	27	15	42	178	5	10	20
15	6	30	21	40	35	12	43	183	5	10	33
16	6	7	10	9	7	18	37	149	2	17	8
14	4	45	47	50	48	36	23	83	2	17	5
16	10	38	31	45	38	39	47	200	2	17	41
17	1	48	42	41	38	27	32	124	2	17	††
16	6	1	3	7	5	8	2	16	5	10	2
17	5	25	25	44	27	49	30	116	5	10	38
18	0	19	38	24	29	28	29	114	5	10	
16	1	10	5	8	36	48	50	236	5	10	
16	11	31	28	15	12	37	16	63	5	1	

Second class—

Order of annual merit.			
	Name.	State.	Date of admission.
4	Twining, Nathan Creek	Wisconsin	Sept. 4, 1885
P25	Webb, Thomas Shappard	Tennessee	Oct. 2, 1885
25	Williams, Philip	Vermont	Sept. 4, 1885
6	Woods, Howard Thorpe	Kansas	May 19, 1885
25	Woodward, Henry Lake	New York	May 19, 1885

42 members—Continued.

Age at date of admission.		Order of merit.							Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Number of demerits.	Months.	Days.	
16	8	6	2	2	3	19	20	82	2	17	4
16	9	40	32	10	30	26	15	60	2	17	25P
15	7	29	16	22	20	44	49	230	2	17	35
16	5	45	46	23	48	20	38	152	5	10	5
17	1	37	34	6	26	47	35	139	5	10	36

Third class—

Order of annual merit.

	Name.	State.	Date of admission.
17	Halley, Claude	Arkansas	Sept. 8, 1886
50	Ballachmider, Frederick William	Wisconsin	Sept. 4, 1886
16	Blankenship, John Millington	Virginia	May 20, 1886
47	Bond, Charles Otis	Iowa	Sept. 8, 1886
28	Boatwick, Lucius Allyn	Massachusetts	Sept. 7, 1886
8	Buck, William Henry	Mississippi	May 23, 1886
28	Buttler, Charles Voorhees	New Jersey	Sept. 7, 1886
25	Catlin, Albertus Wright	Minnesota	May 24, 1886
4	Chase, John Valentine	Louisiana	Sept. 28, 1886
3	Coleman, Noah Tunncliffe	New York	May 21, 1886
5	Coulson, Ben Le Fevre	Ohio	Sept. 6, 1886
6	Davis, Cleland	Kentucky	May 22, 1886
28	Dayton, John Havens	At large	Sept. 12, 1886
40	Dinges, John William	Pennsylvania	Sept. 7, 1886
44	Dismukes, Doctor Eugene	Mississippi	May 21, 1886
24	Eaton, Frederick Lloyd	Michigan	Sept. 6, 1886
20	Edie, John Rufus	At large	May 19, 1886
31	Everhart, Lay Hampton	Alabama	May 20, 1886
24	Gartley, Alonzo	Iowa	May 23, 1886
19	Gibbs, George Fort	District of Columbia	May 19, 1886
5	Harness, Conrad	Texas	May 24, 1886
51	Holland, Frank	Michigan	May 22, 1886
36	Holmes, Urban Tigner	Arkansas	Sept. 13, 1886
53	Horne, Adrian Lorenzo	New Hampshire	May 22, 1886
45	Kochersperger, Frank Henry	Pennsylvania	May 20, 1886
41	Lang, Edward Emilious	Ohio	May 20, 1886
40	Latimer, Julius Lane	West Virginia	Sept. 20, 1886
(6)	Leonard, Will Walker	Texas	Sept. 20, 1886
52	McDonald, Erwin Huntington	New York	Sept. 7, 1886
27	McVay, Charles Butler	Colorado	May 19, 1886
21	Moffett, William Adger	South Carolina	Sept. 6, 1886
9	Moore, Lawrence Henry	New York	Sept. 29, 1886
29	Neville, Wendell Cushing	Virginia	Sept. 12, 1886
23	Norton, Walter Smith	New York	Sept. 7, 1886
46	Okell, Frank Theophilus	Pennsylvania	May 20, 1886
62	Perry, William Yulee	Florida	May 22, 1886
23	Price, Claude Bernard	Mississippi	June 2, 1886
43	Radford, Cyrus Rugg	Kentucky	May 25, 1886
22	Rano, Henry Warren	New York	May 20, 1886
30	Rising, Franklin Sidney	Nevada	May 20, 1886
22	Ritter, Henry Snyder	Pennsylvania	May 23, 1886
41	Ruhn, Thomas Francis	Tennessee	May 20, 1886
41	Ryan, Eugene Dewey	New York	Sept. 4, 1886
40	Ryan, John Paul Joseph	New York	Sept. 6, 1886
37	Saunders, William Turner	At large	May 21, 1886
7	Schofield, Frank Herman	New York	May 21, 1886

a See page 26.

b Turned back.

53 members.

Age at date of admission.		Order of merit.				Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.		Months.	Days.	
15	10	37	14	9	23	49	2	15	17
16	4	40	51	52	31	61	2	15	50
17	9	11	24	19	5	13	5	2	16
15	9	38	46	42	19	37	2	15	47
16	6	20	34	51	13	30	2	15	28
17	7	4	17	15	12	28	5	2	8
17	7	13	28	37	34	67	2	15	28
17	5	32	18	28	43	82	5	2	25
17	8	24	5	6	15	31	2	15	4
16	2	3	6	16	49	106	5	2	3
15	8	57	48	57	34	67	2	15	5
16	6	7	10	8	39	74	5	2	6
17	11	6	33	33	44	59	2	15	26
16	9	35	45	42	28	54	2	15	46
16	7	32	40	45	38	72	5	2	44
16	5	22	30	27	55	159	2	15	34
15	7	54	46	4	40	77	2	17	36
16	5	50	8	35	54	126	5	2	31
16	7	20	12	47	37	69	5	2	24
16	2	32	42	1	20	42	5	2	19
15	5	55	57	53	26	52	2	17	5
17	6	45	36	56	47	103	5	2	51
17	4	24	28	30	52	124	2	15	35
16	2	56	51	54	42	80	5	2	55
16	3	41	36	49	26	52	5	2	45
14	10	14	8	21	45	90	5	2	11
17	11	44	50	41	51	120	2	15	49
16	9	a	a	a	1	3	2	15	(b)
16	10	49	55	45	48	105	2	15	52
17	7	48	20	26	8	23	2	2	27
16	10	15	44	9	9	26	2	15	21
16	2	10	7	2	58	272	2	15	9
16	11	42	21	23	23	49	2	15	29
16	6	50	51	54	29	56	2	15	53
16	11	28	56	49	30	58	5	2	48
16	9	38	54	23	32	64	5	2	42
17	7	27	36	32	6	18	5	2	33
17	11	42	34	39	22	46	5	2	43
17.	3	19	30	31	7	19	5	2	23
16	11	24	27	12	15	31	5	2	20
16	3	28	21	38	9	26	5	2	32
16	6	1	2	2	17	32	5	2	1
16	6	53	49	16	13	30	2	15	41
15	11	28	41	34	34	67	2	15	42
16	1	45	21	39	9	26	5	2	
17	4	5	11	22	4	11	5	2	

Third class—

Order of annual merit.			
	Name.	State.	Date of admission.
18	Signor, Matt Howland	Nebraska	May 21, 1886
22	Snow, William Alanson	Massachusetts	Sept. 4, 1886
30	Soule, John Lutman	Illinois	Sept. 4, 1886
42	Spear, Lawrence	Ohio	May 19, 1886
39	Sullivan, Franklin Buchanan	At large	May 21, 1886
13	Taylor, Montgomery Meigs	At large	May 21, 1886
14	Treadwell, Thomas Conrad	Massachusetts	May 21, 1886
12	Vogelgreang, Charles Theodore	California	Sept. 4, 1886
53	Ward, George Creighton	New York	May 21, 1886
418	White, Chester Bailey	Missouri	Sept. 4, 1886
4	Williams, George Washington	South Carolina	Sept. 24, 1886
10	Zaigmeier, Henry Joseph	Ohio	May 21, 1886

* See page 35.

53 members—Continued.

Age at date of admission.		Order of merit.				Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.		Months.	Days.	
15	5	45	1	28	52	124	5	2	15
16	7	16	39	23	3	10	2	15	22
17	4	28	16	47	23	49	2	15	30
15	6	2	4	14	33	65	5	2	2
14	10	36	32	36	46	100	4	2	39
16	7	12	16	5	50	117	5	2	13
16	11	16	14	19	41	78	5	2	14
17	7	8	24	12	18	35	2	15	13
17	10	52	43	42	57	205	3	17	53
17	11	16	26	16	21	45	2	15	18
17	1	9	3	6	56	196	2	15	4
17	1	23	13	11	1	3	5	2	10

Fourth class—97 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Allen, Charles	Ohio	May 21, 1887	17	1	2	15
Allen, David Van Horn . . .	Tennessee	Sept. 6, 1887	17	2		
Althouse, Adelbert	Illinois	May 21, 1887	18	0	2	15
Anthon, Archibald	New York	June 8, 1887	16	10	2	15
Arison, Edgar Emmet	Pennsylvania . . .	Sept. 5, 1887	14	6		
Beck, William Walker	Maryland	Sept. 6, 1887	17	7		
Belknap, Reginald Rowan . .	Arkansas	Sept. 5, 1887	16	3		
Bierer, Bion Barnett	Kansas	Sept. 24, 1887	17	6		
Blamer, De Witt	Iowa	May 19, 1887	15	4	2	
Blount, Irving	Indiana	Sept. 6, 1887	17	6		
Breckinridge, Joseph Cabell .	Kentucky	Sept. 28, 1887	15	7		
Brotherton, William Daniel .	Wisconsin	Sept. 6, 1887	15	11		
Caldwell, Harry Handly . . .	Illinois	Sept. 7, 1887	14	7		
Camden, Bernard Holt	West Virginia . .	Aug. 27, 1887	18	0		
Carter, James Francis	Pennsylvania . . .	Mar. 24, 1887	18	0	2	15
Christy, Harley Hannibal . .	Ohio	May 24, 1887	16	8	2	15
Conaaul, Charles Follett . . .	Michigan	May 21, 1887	16	8	2	15
Cook, Allen Merriam	Kansas	Sept. 6, 1887	16	11		
Cotton, Charles Stanhope . .	. . . . .	Sept. 7, 1887	17	6		
Curlett, John	Virginia	Sept. 8, 1887	17	6		
Davis, Austin Rockwell . . .	Georgia	Sept. 7, 1887	16	2		
Embrey, Wiley Sims	Tennessee	Sept. 6, 1887	17	6		
Emrich, Charles Ralf	Illinois	May 19, 1887	16	8	2	15
Evans, Waleo	Kansas	Sept. 7, 1887	17	10		
Flowers, Robert Lee	North Carolina . .	Sept. 7, 1887	16	10		
Ford, William Howland . . . .	. . . . .	Sept. 7, 1887	15	7		
Gilchrist, Clarence Dyer . . .	Indiana	Sept. 12, 1887	17	6		
Gillmor, Horatio Gonzalo . . .	Wisconsin	Sept. 5, 1887	17	8		
Goodwin, Leonard	Pennsylvania . . .	Sept. 5, 1887	16	4		
Gross, Louis Herman	Illinois	May 19, 1887	16	2	2	15
Hartung, Renwick John	Iowa	Sept. 6, 1887	17	0		
Hough, Henry Hughes	Massachusetts . .	Sept. 6, 1887	16	8		
Irwin, Noble Edward	Ohio	Sept. 19, 1887	18	0		
Jenkins, Thomas Leoline . . .	North Carolina . .	May 21, 1887	17	10	2	15
Jewell, Charles Theodore . . .	At large	May 19, 1887	15	2	2	15
Jones, Hettiah Ellwood	At large	Sept. 6, 1887	16	8		
Kellogg, Thomas Steele	At large	May 21, 1887	15	0	2	15
Kilbourne Joseph Coolidge . .	Ohio	Sept. 6, 1887	16	7		
Kennell, Henry Charles	Wisconsin	Sept. 6, 1887	16	4		
Lancaster William Lycurgus . .	Alabama	May 23, 1887	17	2	2	15
Lane, Rufus Herman	Ohio	June 2, 1887	16	7	2	15
Larkin, Rosier Bonaparte . . .	Virginia	Sept. 7, 1887	16	1		
Lawa, George William	Iowa	May 21, 1887	17	2	2	15
Leola, Joseph Allen	Pennsylvania . . .	May 19, 1887	17	5	2	15
Lough, Richard Henry	Mississippi	Sept. 6, 1887	17	1		
Leonard, Will Walker	Texas	Sept. 20, 1886	16	0	2	15
Low, Robinson Lee	Pennsylvania . . .	May 21, 1887	16	2	2	15
Lyle Charles William	Virginia	Sept. 8, 1887	17	1		
Macfarland, Horace Greeley . .	New York	Sept. 6, 1887	14	0		

Fourth class—97 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Magill, Louis John	Pennsylvania . .	June 17, 1887	16	4	2	15
Malone, John Cary	West Virginia .	Sept. 6, 1887	16	6		
McGrann, William Hugh . .	Tennessee . . .	May 20, 1887	17	7		
McKeage, Robert	Pennsylvania . .	Sept. 5, 1887	17	4		
McKelvy, William Neesler .	Pennsylvania . .	May 20, 1887	17	11	2	15
McLemore, Albert Sidney .	Tennessee . . .	May 23, 1887	18	0	2	15
McReavy, Herbert Ellsworth .	Washington Ter.	Sept. 7, 1887	15	11		
Maurin, Timothy Francis . .	Louisiana . . .	May 21, 1887	16	9	2	15
Merrill, Clarence Sidney . .	Connecticut . .	Sept. 7, 1887	16	10		
Moale, John Gray Foster . .	California . . .	Sept. 6, 1887	16	8		
Murphey, Charles Kemp . . .	Tennessee . . .	Sept. 7, 1887	16	6		
Myers, John Twiggs	Georgia	Sept. 27, 1887	16	8		
Ninde, Daniel Benjamin . . .	Indiana	May 20, 1887	16	10	2	15
Nire, Kaga Kazu	Empire of Japan	May 21, 1887	17	8	2	15
Nott, George William	Louisiana . . .	Sept. 7, 1887	18	0		
Owsley, Letcher	Kentucky . . .	Sept. 7, 1887	17	6		
Pillot, Peter Stuyvesant . . .	Nebraska . . .	Sept. 7, 1887	16	10		
Pollock, Edwin Taylor . . .	Ohio	May 20, 1887	16	7	2	15
Preston, Charles Francis . . .	Maryland . . .	Sept. 6, 1887	16	4		
Reed, Milton Eugene	Iowa	Sept. 5, 1887	17	10		
Reese, William James	Texas	Sept. 5, 1887	17	6		
Richards, George	Ohio	Sept. 12, 1887	15	7		
Ridgely, Randolph	Georgia	Sept. 6, 1887	16	10		
Robinson, Roby	Alabama	May 21, 1887	16	6	2	15
Robison, John Keeler	Michigan	May 20, 1887	16	6	2	15
Rowan, John Howard	Pennsylvania . .	Sept. 27, 1887	16	8		
Russell, Edward Gaston . . .	Georgia	Sept. 7, 1887	17	9		
Saes, Maurice	Texas	Sept. 7, 1887	15	1		
Senn, Thomas Jones	South Carolina .	May 19, 1887	15	5	2	15
Shepard, George Hugh	Wisconsin . . .	Sept. 27, 1887	15	9		
Smith, Harry Eaton	Ohio	May 20, 1887	17	8	2	15
Smith, Henry Gerrish	Ohio	Sept. 5, 1887	17	5		
Smith, Lucian Greathouse . .	Illinois ^e	June 3, 1887	17	6	2	15
Sparkman, Sullivan Thomas .	South Carolina	Sept. 24, 1887	17	9		
Stearns, Clark Daniel	Michigan	Sept. 5, 1887	17	3		
Sypher, Jay Hale	Arizona	Sept. 5, 1887	16	6		
Theall, Elisha	New York . . .	May 23, 1887	14	5	2	15
Todd, Van Dyke	Texas	May 21, 1887	16	11	2	15
Trickle, Edward	Illinois	May 20, 1887	17	7	2	15
Waller, William Lewis	Virginia	May 21, 1887	17	11	2	15
Watt, Richard Morgan	Pennsylvania . .	Sept. 22, 1887	15	3		
Weaver, Van Wyck . . . .	. . . .	Sept. 7, 1887	17	5		
Wedekind, George	New York . . .	Sept. 7, 1887	15	7		
Wells, Chester	Pennsylvania . .	Sept. 10, 1887	16	11		
Willard, Arthur Lee	Missouri	Sept. 7, 1887	17	7		
Williams, Dion	Ohio	July 16, 1887	17	5		
Williams, John Clinton . . .	Virginia	Sept. 6, 1887	17	6		
Zahn, Frank Baker	Pennsylvania . .	Sept. 5, 1887	16	3		

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

October 25, 1887.

First class	27 members
Second class	42 members
Third class	53 members.
Fourth class	97 members
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Total	220

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

November 21, 1886, to October 25, 1887.

APPOINTED ENSIGN, U. S. NAVY.

Naval Cadet Harrison Augustus Bispham, class of 1885	July 1, 1887
Naval Cadet Volney Ogle Chase, class of 1885	July 1, 1887
Naval Cadet Robert Edward Coontz, class of 1885	July 1, 1887
Naval Cadet Albert Christian Dieffenbach, class of 1885	July 1, 1887
Naval Cadet Edward Walter Eberle, class of 1885	July 1, 1887
Naval Cadet George Robert Evans, class of 1885	July 1, 1887
Naval Cadet Theodore Cornell Fenton, class of 1885	July 1, 1887
Naval Cadet William Wirt Gilmer, class of 1885	July 1, 1887
Naval Cadet George Washington Kline, class of 1885	July 1, 1887
Naval Cadet Charles Monod McCormick, class of 1885	July 1, 1887
Naval Cadet John Patrick McGuinness, class of 1885	July 1, 1887
Naval Cadet William Gardner Miller, class of 1885	July 1, 1887
Naval Cadet David Small Nes, class of 1885	July 1, 1887
Naval Cadet Robert Lee Russell, class of 1885	July 1, 1887
Naval Cadet Armistead Rust, class of 1885	July 1, 1887
Naval Cadet James Elliott Shindel, class of 1885	July 1, 1887
Naval Cadet George Ralph Slocum, class of 1885	July 1, 1887
Naval Cadet Charles Semmes Stanworth, class of 1885	July 1, 1887
Naval Cadet Joseph Strauss, class of 1885	July 1, 1887
Naval Cadet Glennie Tarbox, class of 1885	July 1, 1887
Naval Cadet John Godwin Tawresay, class of 1885	July 1, 1887
Naval Cadet Benjamin Wright, class of 1885	July 1, 1887

HONORABLY DISCHARGED.

Naval Cadet James Thomas Bootes, class of 1885	June 30, 1887
Naval Cadet Albert Burnetine, class of 1885	June 30, 1887
Naval Cadet Charles Macon Corpeing, class of 1885	June 30, 1887
Naval Cadet Arthur Henry Dutton, class of 1885	June 30, 1887
Naval Cadet Walter Waller Joynee*, class of 1885	June 30, 1887
Naval Cadet Benjamin Mathews Lombard†, class of 1885	June 30, 1887

Naval Cadet William McKay*, class of 1885	June 30, 1887
Naval Cadet Charles Carroll Poe, class of 1885	June 30, 1887
Naval Cadet Thomas Bog Slade, class of 1885	June 30, 1887

RESIGNED.

Naval Cadet James Nelson Alexander, second class	Feb. 4, 1887
Naval Cadet Harvey Carroll Alford, third class	May 4, 1887
Naval Cadet George Henry Ament, fourth class	Feb. 14, 1887
Naval Cadet Robert Wilson Beale, fourth class	Feb. 14, 1887
Naval Cadet William Walker Beck, fourth class	Feb. 4, 1887
Naval Cadet Edmund Ingles Berkeley, fourth class	Feb. 17, 1887
Naval Cadet John Sylvanus Carnahan, first class	Mar. 1, 1887
Naval Cadet Porter Chandler, fourth class	Feb. 14, 1887
Naval Cadet Roten Nelson Chappell, fourth class	Feb. 14, 1887
Naval Cadet Edward Edmund Clement, second class	May 11, 1887
Naval Cadet Hiram Benjamin Close, second class	Sept. 7, 1887
Naval Cadet Ben Le Fevre Coulson, fourth class	Oct. 4, 1887
Naval Cadet Melville Demarest, fourth class	Feb. 14, 1887
Naval Cadet Selden Emerson, third class *	July 1, 1887
Naval Cadet Charles James Edwards Erd, fourth class	Feb. 21, 1887
Naval Cadet William Henry Gould, second class	Feb. 17, 1887
Naval Cadet Frank McDonald Govey, fourth class	Feb. 23, 1887
Naval Cadet Henry Thaddens Green, fourth class	Feb. 14, 1887
Naval Cadet Conrad Harness, fourth class	June 11, 1888
Naval Cadet Thomas Leoline Jenkins, fourth class	Mar. 31, 1887
Naval Cadet Vandyke Johns, third class	June 17, 1887
Naval Cadet Sydney Smith Johnson, third class	June 23, 1887
Naval Cadet Robert Morris Kennedy, third class	May 26, 1887
Naval Cadet Claude Hamilton Kinnear, second class	Feb. 7, 1887
Naval Cadet William Daniel Kochersperger, second class	Feb. 14, 1887
Naval Cadet Daniel Henry Kremer, fourth class	Feb. 15, 1887
Naval Cadet William Lycurgus Lancaster, fourth class	Feb. 11, 1887
Naval Cadet Walter Dyer Litchfield, fourth class	May 25, 1887
Naval Cadet John Joseph Martin, second class	Jan. 7, 1887
Naval Cadet Thomas John Mason, fourth class	Feb. 14, 1887
Naval Cadet Albert Sidney McLemore, third class	April 29, 1887
Naval Cadet Edmund Preston Melson, second class	Feb. 4, 1887
Naval Cadet Wallace Blount Montgomery, third class	June 17, 1887
Naval Cadet Joseph Ralston Morris, second class	Feb. 5, 1887
Naval Cadet John Drake Stockton Mullen, fourth class	Feb. 9, 1887
Naval Cadet Ignatius Ingoldsby Murphy, second class	April 20, 1887
Naval Cadet George Howard Paul, fourth class	Feb. 17, 1887
Naval Cadet Charles Francis Preston, third class	June 17, 1887
Naval Cadet William Wise Raymond, third class	Oct. 10, 1887
Naval Cadet Charles Francis Regan, fourth class	Feb. 14, 1887
Naval Cadet Ziba Wells Reynolds, fourth class	Feb. 23, 1887
Naval Cadet Henry James Rightor, third class	Jan. 27, 1887
Naval Cadet Willie McDaniel Rowan, second class	Feb. 11, 1887
Naval Cadet John Bennett Seeley, third class	Feb. 17, 1887
Naval Cadet George Shepley Selfridge, second class	Mar. 1, 1887
Naval Cadet Horatio Clay Sexton, third class	Nov. 23, 1886
Naval Cadet John Sheehan, fourth class	Feb. 14, 1887
Naval Cadet Frederick Shellaberger, fourth class	Feb. 17, 1887

* Physical disqualification.

Naval Cadet Glenn Shepard Smith, fourth class	Feb. 14, 1887
Naval Cadet William Clarkson Van Antwerp, second class	Jan. 11, 1887
Naval Cadet Chester Bailey White, third class	Oct. 7, 1887
Naval Cadet Henry White Williams, fourth class	Mar. 2, 1887
Naval Cadet John Gilbert Willis, fourth class	May 31, 1887
Naval Cadet Howard Thorpe Woods, third class	June 17, 1887

DISMISSED.

Naval Cadet James William Clinton*, fourth class	Feb. 10, 1887
Naval Cadet George Buchanan Fife*, fourth class	Feb. 10, 1887
Naval Cadet Augustus Francis Horne, fourth class (dropped)	Mar. 1, 1887
Naval Cadet Robert Carter Hull, second class (dropped)	Sept. 26, 1887
Naval Cadet Edward Emillions Lang*, third class	Sept. 27, 1887
Naval Cadet Charles Waller Potter*, third class	April 8, 1887
Naval Cadet Thomas Shappard Webb†, third class (dropped)	Sept. 26, 1887

* For hazing.

† Physically disqualified.

MERIT-ROLLS FOR 1886-'87.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 64, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for conduct, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls."—(Regulations U. S. Naval Academy, § 150.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum, read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum, read "passed."

P, denotes physically disqualified for the naval service.

†, denotes found deficient, allowed a re-examination, and continued with class.

††, found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§, found deficient, and recommended to be dropped.

a, denotes absence from examination.

Merit-roll of the graduating class of naval cadets at the conclusion of the six years' course, June, 1887.

Order of merit	Name	Subjects					Cruise reports	Aggregate for ex-amination.	General aggregate for four years.	Final aggregate	Assignment.
		Naval tactics	Geometry	Algebra	Navigation	French and Spanish					
	Maxima	60	48	48	48	24	12	240	768	1000	
1	Tawney, John Edwin	51.00	44.40	44.82	41.28	15.00	11.16	207.96	692.55	900.51	Ensign.
2	McKay, William	44.25	40.80	33.84	41.88	21.00	10.35	192.12	707.63	899.75	Honorably discharged.
3	Dieffenbach, Albert Christian	43.95	33.48	41.28	36.60	20.70	10.86	186.87	688.53	875.40	Ensign.
4	Fenton, Theodore Cornell	44.25	39.48	41.98	33.60	19.80	10.44	189.45	679.19	868.64	Ensign.
5	Chase, Volney Lytle	45.45	33.60	32.76	27.60	18.00	10.56	167.97	655.81	823.78	Ensign.
6	Merum, George Ralph	48.75	37.44	36.96	36.76	21.00	11.79	191.70	628.24	819.94	Ensign.
7	Miller, William Gardner	42.45	34.08	35.38	37.56	15.30	10.44	178.11	634.88	809.99	Ensign.
8	Joynes, Walker Waller	41.70	32.52	36.00	33.36	17.40	11.40	172.34	619.25	791.63	Honorably discharged.
9	Kilue, George Washington	36.45	37.08	28.20	33.36	16.50	11.31	162.90	626.20	749.10	Ensign.
10	McGuinness, John Patrick	47.25	43.08	39.48	37.80	18.90	9.00	196.60	591.35	746.95	Ensign.
11	Strauss, Joseph	42.75	41.64	40.44	33.40	18.90	9.64	184.79	594.24	743.03	Ensign.
12	Stanworth, Charles Thomas	40.95	38.28	35.40	34.20	17.40	10.44	176.67	603.73	780.40	Ensign.
13	Russell, Robert Lee	45.45	39.36	32.76	41.64	18.90	9.24	187.35	591.25	778.64	Ensign.
14	Biapham, Harrison Augustus	40.95	32.04	40.68	36.60	16.50	10.41	183.18	593.87	777.05	Ensign.
15	Lumbar, Benjamin Mathews	38.25	41.88	35.40	39.96	16.20	8.24	160.03	590.22	770.25	Honorably discharged.
16	Ruel, Armistead	46.95	31.80	37.08	35.76	18.00	11.16	177.75	580.38	758.13	Ensign.
17	Krane, George Robert	43.95	43.86	38.64	41.16	16.50	10.56	194.37	557.00	751.37	Ensign.
18	Eberle, Edward Walter	42.75	37.80	33.12	32.40	14.40	10.89	171.36	572.19	744.23	Ensign.
19	Rhindel, James Elliott	41.70	35.16	37.92	35.28	15.00	9.99	175.05	567.51	742.56	Ensign.
20	Noe, David Small	40.95	31.80	34.32	33.96	15.00	10.20	166.23	573.66	739.89	Ensign.
21	McCormick, Charles Minod	40.20	37.92	40.80	30.00	13.60	10.65	175.17	562.52	737.69	Ensign.
22	Tarbox, Glennie	43.95	34.92	36.48	33.44	19.50	10.35	172.68	557.84	736.56	Ensign.
23	Gillmer, William Wirt	42.00	31.20	35.88	32.40	12.00	10.41	163.49	567.61	631.50	Ensign

24	Coonts, Robert Edward	.	.	.	40.95	34.32	34.56	30.00	13.50	8.91	162.24	555.24	717.48	Ensign.
25	Wright, Benjamin	.	.	.	89.75	36.48	36.12	33.60	16.20	9.84	171.99	545.28	717.27	Ensign.
26	Slade, Thomas Bog	.	.	.	35.25	26.76	35.04	27.60	12.00	10.65	147.30	568.48	715.78	Honorably discharged.
27	Poe, Charles Carroll	.	.	.	35.25	30.00	22.68	30.12	19.50	9.69	147.24	549.45	696.69	Honorably discharged.
28	Burnstine, Albert	.	.	.	39.00	32.52	32.28	30.60	15.00	8.91	158.31	528.25	688.56	Honorably discharged.
29	Corpenning, Charles Macon	.	.	.	39.75	28.20	36.00	27.96	13.80	8.76	154.47	527.60	680.07	Honorably discharged.
30	Bootes, James Thomas	.	.	.	39.75	35.04	30.84	28.92	13.50	9.81	157.86	515.21	673.07	Honorably discharged.
.	Dutton, Arthur Henry	.	.	.	37.50	34.44	30.60	30.60	16.20	8.94	158.28	527.86	686.14	Honorably discharged. c
.	Thompson, Alexander	.	.	.								606.17		Absent. Not examined. d

b At his own request.

c Eyes injured not in line of duty. At his own request and by advice of medical officer, did not attempt written examination; examined orally; waived class number.

Placed next below Naval Cadet Bootes by vote of the Academic Board.

d Recommended to be dismissed, by vote of the Academic Board.

MERIT-ROLL.

Merit-roll of the naval cadets of the first class at the annual examination, June 30, 1887.

Order of merit.	NAME.	Astronomy, navigation, and surveying.		Least squares, and strength of materials.		Ordnance and gunnery.		Seamanship, ship-build- ing, and naval tactics.		Practical instruction in steam.		Physiology and hygiene.		Conduct.		Aggregate for fourth year.		Aggregate for third year.		Aggregate for second year.		Aggregate for first year.		General aggregate for four years.	
		76	90	76	90	76	90	76	90	76	90	76	90	76	90	76	90	76	90	76	90	76	90	76	90
•1	Robert Mecher	64.97	12.75	71.25	78.81	7.00	8.67	20.00	274.45	212.00	123.40	61.23	680.08												
•2	Frank W. Hibbs.	65.93	17.40	65.93	78.20	7.04	9.24	19.73	263.47	201.10	124.43	64.18	687.18												
•3	Ellet Snow	64.96	16.96	64.79	72.14	7.12	9.00	19.87	245.85	204.33	130.00	60.76	682.54												
•4	Benton C. Decker	62.70	16.85	65.55	72.37	7.04	8.73	18.40	252.64	194.33	127.80	61.82	638.08												
•5	Mark L. Bristol	64.80	17.75	65.55	83.72	6.70	8.85	12.53	261.00	192.90	119.83	59.80	634.12												
•6	Benjamin W. Wells, jr.	62.12	15.00	61.37	74.96	6.86	9.18	17.20	247.34	182.20	127.36	61.20	618.28												
•7	Newton A. McCully, jr.	63.05	16.20	61.78	60.23	6.73	8.46	19.20	245.31	189.46	125.06	65.06	616.48												
•8	Walter S. Burke	60.61	15.70	60.61	66.70	6.76	9.03	19.07	238.48	186.37	127.37	59.19	616.41												
•9	William S. Cloke	60.43	17.00	62.33	63.94	6.80	8.73	16.00	235.21	183.53	127.42	62.90	600.15												
•10	Ben. W. Stearns	68.78	15.40	62.13	64.86	6.80	8.25	19.33	245.55	171.37	123.96	62.86	603.73												
•11	Levi C. Bortolotto	62.70	14.06	61.18	60.93	6.90	8.86	15.73	236.97	172.32	128.52	62.96	601.76												
•12	Samuel R. Harbut	58.33	16.30	63.05	60.72	6.50	8.04	16.67	220.21	172.37	128.00	65.11	596.38												
•13	Edward Meale, jr.	59.28	15.00	59.28	76.13	6.76	8.94	18.00	244.79	165.42	118.24	64.26	592.00												
•14	Henry F. Bryan	58.52	14.10	58.05	62.23	6.96	8.43	14.80	221.19	168.81	128.74	60.06	589.30												
•15	William G. McMillan	55.48	12.70	57.19	64.86	6.76	8.43	18.27	224.00	174.36	121.37	60.24	580.06												
•16	Edward H. Durell	54.06	12.20	54.53	64.86	7.00	9.84	17.87	222.45	172.31	120.91	62.97	579.04												
•17	George W. Logan	61.80	14.80	60.04	61.87	6.76	8.01	15.00	237.88	166.06	119.90	64.03	578.47												
•18	Andrew T. Long	59.00	14.06	58.4	60.82	6.06	8.46	18.40	225.32	162.23	119.40	60.67	577.62												
•19	Ford H. Brown	60.04	14.45	62.84	63.71	6.74	8.22	19.33	226.23	171.61	110.00	57.48	575.42												
•20	Henry L. Peckham	54.24	15.10	55.10	67.63	6.94	9.46	18.40	228.88	165.34	115.00	59.80	569.62												
•21	Thomas Washington	54.73	13.90	55.10	60.70	6.06	7.96	20.00	219.06	170.46	116.02	61.44	564.90												
•22	Archibald H. Scales	55.96	12.75	57.28	61.18	6.00	8.01	18.40	221.18	161.47	107.96	55.36	565.90												

23	Clarence M. Stone	.	.	.	58.14	14.20	56.43	65.78	6.86	7.98	16.98	226.32	106.72	111.48	53.13	562.65
24	Crelghton Churchhill	.	.	.	57.88	14.40	61.37	65.32	6.76	9.00	18.80	233.03	160.42	110.88	56.00	560.42
25	Archibald H. Davis	.	.	.	54.72	13.25	53.20	63.71	6.86	8.10	18.67	218.51	158.75	113.10	60.27	550.63
26	Charles E. Johnston	.	.	.	54.53	12.70	51.11	57.73	6.70	8.10	18.27	209.14	155.92	119.13	60.67	544.86
27	Herbert L. Draper	.	.	.	50.92	13.05	50.35	63.94	6.60	8.46	16.40	209.72	162.26	114.60	56.38	543.06
28	Francis Boughter	.	.	.	50.09	15.00	57.00	65.78	6.30	8.34	11.87	223.38	156.81	109.92	52.70	542.81
29	Victor Blue	.	.	.	57.19	14.15	52.25	60.26	6.64	8.19	19.73	218.41	159.26	107.79	56.91	542.37
30	Michael R. Pigott	.	.	.	49.21	12.50	48.07	57.50	6.56	9.72	12.53	196.09	166.64	118.79	60.55	542.07
31	Samuel P. Edmonds	.	.	.	57.76	13.10	56.06	60.72	6.70	7.86	16.40	218.59	157.48	110.18	55.43	541.68
32	Guy H. Burrage	.	.	.	53.01	14.35	54.91	62.33	6.74	7.50	20.00	218.84	167.31	108.78	50.48	541.41
33	Frank M. Russell	.	.	.	55.48	14.05	52.82	63.48	6.56	8.46	19.33	220.18	161.57	106.60	51.67	540.02
34	Ross Coleman	.	.	.	51.30	12.80	51.68	60.95	6.68	8.13	14.93	206.57	161.02	108.71	54.63	533.93
35	Henry A. Allen	.	.	.	49.21	14.10	50.54	60.49	6.70	8.01	15.33	204.38	159.73	109.20	53.90	527.21
36	Richard H. Jackson	.	.	.	52.06	13.35	51.49	60.26	6.84	8.13	18.27	210.40	153.19	108.33	55.15	527.07
37	Frederick E. Swanstrom	.	.	.	54.15	12.85	50.92	62.33	6.84	7.92	14.80	209.81	152.02	110.68	54.45	526.96
38	Claude S. Cochran	.	.	.	56.24	13.10	50.54	60.72	6.46	7.50	15.73	210.29	153.03	106.90	57.03	523.25
39	James G. Ballinger	.	.	.	56.43	12.55	51.87	58.19	6.56	8.04	7.73	201.37	154.81	109.35	51.82	517.35
40	Collin S. Craig	.	.	.	48.83	13.65	50.54	60.95	6.56	8.13	12.13	200.79	152.45	104.88	52.24	510.36
41	Charles E. Hudson	.	.	.	49.21	13.45	49.02	61.18	6.76	7.74	17.60	204.96	154.18	98.93	48.45	506.52
42	William B. Moseley	.	.	.	49.02	12.60	47.50	57.50	6.60	7.68	10.53	191.43	148.42	104.88	56.31	502.04
43	Louis le S. Young	.	.	.	49.02	14.25	48.83	61.41	5.96	7.50	13.07	200.04	144.04	95.16	51.02	490.25
44	Thomas M. O'Halloran	.	.	.	50.54	13.35	49.59	59.80	6.24	7.89	5.73	193.14	140.62	98.53	55.60	488.19
(d)	Eli K. Cole	.	.	.	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	153.96	113.89	57.14	.....

b Completed four-years' course "with credit."

c Completed four-years' course "with distinction."

d Turned back.

Merit-roll of the naval cadets of the second class at the annual examination, June 1887.

Order of annual merit.	NAME.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Aggregate.
		100	100	50	25	25	75	10	925
1	William N. Vaneant	15.64	15.24	51.80	27.09	27.86	65.88	9.18	212.09
2	Frank Marble	15.32	14.16	51.52	24.71	26.88	62.64	9.48	204.71
3	Curtis D. Wilbur	11.20	14.48	46.76	26.88	26.11	62.46	11.34	199.23
4	Ashley H. Robertson	15.00	14.16	44.66	21.70	22.94	59.22	10.44	189.12
5	Casey B. Morgan	14.18	14.32	42.96	22.65	22.82	59.22	8.70	182.07
6	George N. Hayward	13.12	13.72	43.26	24.92	22.61	57.06	1.14	175.83
7	Carlo B. Brittain	11.68	14.32	41.86	21.56	21.21	56.90	9.12	175.55
8	Marcus L. Miller	12.76	13.48	41.72	21.94	21.21	54.72	9.42	175.29
9	Ernest E. West	12.56	12.32	40.32	21.42	22.12	54.00	9.78	172.42
10	Samuel S. Robinson	12.00	14.28	41.30	20.37	21.77	53.82	8.04	172.18
11	Henry K. Benham	11.24	12.60	42.28	22.94	21.84	51.66	8.58	172.14
12	Oscar W. Koster	11.24	12.72	42.96	19.11	18.76	58.32	7.44	171.57
13	William M. Crose	14.96	14.48	34.08	20.58	20.58	53.82	8.46	170.96
14	Delworth W. Beawick	12.84	13.92	39.08	19.32	21.77	52.38	10.38	169.71
15	John A. Lejeune	11.08	13.72	41.02	18.83	21.77	52.74	9.36	168.52
16	Armin Hartrath	10.80	15.00	42.84	21.21	24.15	53.64	9.42	168.06
17	Hiram B. Clear	12.56	11.84	39.20	21.34	24.57	53.10	2.18	166.29
18	Lloyd H. Chandler	12.64	14.12	36.82	17.78	21.84	51.30	10.74	165.24
19	Charles F. Hughes	12.00	13.48	36.12	20.44	19.46	53.82	9.72	165.04
20	John F. Hubbard	11.52	13.96	39.90	23.10	22.12	50.94	2.52	164.66
21	James H. Reid	12.50	12.20	43.40	17.15	19.95	48.24	10.50	163.64
22	Albert L. Norton	13.80	14.32	36.26	17.50	19.25	50.94	10.86	162.93
23	Leroy A. Stafford	11.72	12.00	46.70	18.76	22.17	47.88	1.08	161.37
24	Samuel J. Aiken	11.04	12.92	29.48	17.71	19.81	48.78	9.78	160.52
25	Louis J. Anderson	11.56	13.12	40.04	18.69	19.04	49.68	7.86	159.99
26	William B. Franklin	12.52	12.24	25.28	18.48	18.90	48.06	11.22	158.79
27	Clarence L. A. Ingate	12.00	12.68	37.80	17.50	19.60	49.80	6.90	157.40
28	Edward L. Beach	11.52	12.92	37.94	17.71	18.55	46.62	9.84	156.10
29	Stuart W. Cramer	14.72	12.96	25.08	17.50	18.90	46.62	8.94	155.62
30	Herbert G. Gates	12.08	14.00	25.70	17.04	19.95	46.80	9.18	154.79
31	Henry A. Wiley	10.84	13.20	36.90	18.41	18.76	47.24	7.86	153.07
32	Herman O. Stickney	12.56	11.80	26.26	16.66	18.41	46.62	9.54	152.85
33	Theodore P. Kane	11.92	11.40	37.10	16.45	18.99	47.88	8.16	149.21
34	Frederick B. Hazzett, jr	11.28	11.92	26.96	16.06	17.99	45.72	7.14	147.67
35	Edwin R. Quimby	10.00	11.52	26.54	17.57	17.50	46.26	0.96	139.45
36	Robert C. Hull	10.80	11.68	40.46	19.53	17.99	44.10	1.44	146.00
37	William F. Bays	12.52	12.16	24.02	16.31	16.80	42.48	9.16	142.69
38	Monroe D. Munroe	11.00	12.16	25.26	16.45	17.57	44.64	2.96	142.34

Merit-roll of the naval cadets of the third class at the annual examination, June, 1887.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Aggregate.
		48	24	24	24	24	8	152
'1	Arthur B. Hoff	45.00	20.64	22.56	23.22	20.64	7.01	139.07
'2	George H. Rock	45.60	20.28	21.00	22.26	21.00	7.49	137.63
'3	Richmond P. Hobson	45.36	19.68	21.84	22.56	18.72	6.59	134.75
'4	Nathan C. Twining	42.96	20.46	22.20	22.62	19.56	5.38	133.18
'5	Benjamin F. Hutchison	43.92	20.04	21.60	22.98	17.64	6.50	132.68
6	George R. Marvell	44.88	16.74	17.70	16.38	23.46	7.55	126.71
7	Sumner E. Kittelle	35.76	17.82	21.90	20.64	22.14	6.94	125.20
8	William V. Pratt	41.52	18.06	20.82	21.66	19.68	3.23	124.97
9	Charles G. Long	38.04	17.22	19.38	21.84	20.16	7.23	123.87
10	Louis McC. Nulton	37.56	17.64	18.36	18.96	23.34	6.94	122.80
11	Lewis C. Lucas	37.56	16.92	20.16	19.26	21.48	5.31	120.69
12	George W. Danforth	36.72	19.56	20.22	18.06	18.90	6.59	120.05
13	William D. MacDougall	32.52	18.24	19.92	20.46	21.90	5.95	118.99
14	Bertram S. Neumann	35.40	17.76	18.24	16.80	21.90	6.73	116.85
15	Cleland N. Offley	35.76	17.52	17.40	18.18	19.92	6.72	115.50
16	Edward R. Lowndes	39.36	17.58	17.28	15.72	24.06	0.83	114.83
17	Louis A. Kaiser	38.52	16.50	18.30	17.88	18.18	4.45	113.83
18	William C. Cole	37.32	17.94	20.28	17.52	16.62	3.58	113.26
19	Thomas P. Magruder	36.84	18.12	19.20	18.72	18.48	1.73	113.09
20	John B. Patton	39.12	17.64	16.32	17.04	19.98	2.80	112.40
21	Warren J. Terhune	38.76	19.92	20.88	16.50	15.24	0.45	111.81
22	Cully F. Thomas	33.24	16.38	19.74	19.20	16.86	5.98	111.40
23	Ben H. Fuller	33.96	16.32	18.18	17.82	20.88	2.56	109.72
24	Louis R. de Steiguer	36.12	15.42	18.66	16.92	18.24	4.35	109.71
25	Thomas S. Webb	30.84	15.96	20.28	16.80	19.32	6.08	109.28
26	George G. Mitchell	33.96	16.20	15.72	17.94	19.98	5.41	109.21
27	Edward Gaines	35.28	15.96	18.00	16.68	17.64	5.38	108.94
28	George B. Bradshaw	37.68	16.80	18.06	18.18	16.14	2.03	108.91
29	George W. Kirk	33.48	15.84	18.90	16.50	18.90	5.25	108.87
30	George H. Mendell, jr	32.04	15.90	19.08	20.04	15.84	4.90	107.80
31	Charles A. Brand	33.96	15.42	18.24	18.30	18.48	3.33	107.73
32	Robert McM. Dutton	31.92	16.44	19.02	16.56	20.64	3.07	107.65
33	William W. Phelps	33.36	17.16	17.22	16.62	20.40	2.14	106.90
34	George L. Fermier	32.64	15.42	16.02	15.96	20.34	6.40	106.78
35	Phillip Williams	35.76	17.58	18.84	17.94	15.66	0.64	106.42
36	Henry L. Woodward	31.44	15.90	21.18	17.22	15.30	3.55	104.59
37	Robert E. Carney	31.08	17.52	17.40	18.42	17.04	2.56	104.02
38	William H. Seymour	33.96	16.68	16.44	17.04	15.12	4.29	103.53
39	Frederick N. Lewis	31.56	15.06	17.76	17.58	15.78	4.42	102.16
40	Louis L. Driggs	30.12	15.78	19.44	16.50	17.88	2.05	101.77
41	Julius Prochaska	31.08	16.14	16.32	16.50	16.44	1.60	98.68
†	William K. Harrison	30.36	14.04	17.28	16.74	17.88	5.41	101.71
§	Vandyke Johns	28.44	14.94	18.30	16.74	16.08	6.59	

Merit-roll of the naval cadets of the third class, etc.—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Aggregate.
		48	24	24	24	24	8	152
§	Howard T. Woods	29.52	14.34	15.84	15.48	19.22	2.14	100.64
¶	William W. Raymond	29.04	15.34	16.92	16.50	12.26	4.03	100.09
†	Ernest B. Anderson	29.12	14.52	16.62	15.96	15.26	5.18	97.76
§	Sidney R. Johnson	29.40	15.42	17.46	16.20	15.12	4.06	97.66
§	Wallace B. Montgomery	29.12	12.22	15.48	15.26	15.66	2.69	96.63
§	Charles F. Preston	29.52	14.04	15.06	15.48	16.92	5.24	96.26
§	Seiden Emerson	28.06	12.20	16.92	15.14	17.70	2.84	95.58

Merit-roll of the naval cadets of the fourth class at the annual examination, June, 1887.

Order of annual merit.	NAME.	English and his- tory.	Algebra and ge- ometry.	French and Span- ish.	Conduct.	Aggregate.
	Maxima	24	24	24	4	76
*1	Thomas F. Ruhm	21.36	23.04	22.38	3.57	71.25
*2	Lawrence Spear	21.30	23.22	20.58	3.13	68.23
*3	Noah T. Coleman	20.82	22.86	19.98	2.59	66.25
*4	John V. Chase	18.18	23.16	21.24	3.59	66.17
*4	George W. Williams	19.98	23.46	21.34	1.39	66.17
*6	Cleland Davis	20.16	20.64	21.06	3.01	64.87
7	Frank H. Schofield	20.52	20.52	19.62	3.85	64.51
8	William H. Buck	20.70	19.62	20.34	3.63	64.29
9	Lawrence H. Moses	19.92	21.60	22.38	0.37	64.27
10	Henry J. Ziegemeier	18.30	19.92	20.88	3.96	63.06
11	Edward E. Lang	19.32	20.82	19.68	2.80	62.62
12	Charles T. Vogelgesang	20.04	18.18	20.64	3.53	62.39
13	Montgomery M. Taylor	19.50	18.96	21.36	2.44	62.26
14	Thomas C. Treadwell	19.20	19.80	19.92	2.96	61.88
15	Matt H. Signor	16.74	24.06	18.66	2.35	61.81
16	John M. Blankenship	19.60	18.18	19.92	3.83	61.78
17	Claude Bailey	17.58	19.80	20.94	3.35	61.67
18	Chester B. White	19.20	18.06	19.98	3.40	60.64
19	George F. Gibbs	17.88	16.38	22.92	3.44	60.62
20	Franklin S. Rising	18.18	17.94	20.64	3.59	60.35
21	William A. Moffett	19.26	16.20	20.94	3.65	60.06
22	William A. Snow	19.20	16.74	19.38	3.87	59.19
23	Henry W. Rano	19.14	17.70	18.36	3.75	58.95
24	Alonzo Gartley	18.84	20.16	16.62	3.08	58.70
25	Albertus W. Catlin	17.88	19.08	18.66	2.91	58.53
26	John H. Dayton	20.28	17.16	18.06	2.81	58.31
27	Charles B. McVay	16.68	18.66	19.26	3.69	58.29
28	Charles V. Buttler	19.44	17.82	17.70	3.11	58.07
29	Wendell C. Neville	17.04	18.24	19.38	3.35	58.01
30	John L. Soule	17.94	19.68	16.62	3.85	57.59
31	Lay H. Everhart	16.26	20.82	17.94	2.82	57.34
32	Henry S. Ritter	17.94	18.24	17.28	3.65	57.11
33	Claude B. Price	18.00	16.86	18.30	3.76	56.92
34	Frederick L. Eaton	18.42	17.70	18.84	1.88	56.84
35	Urban T. Holmes	18.18	17.82	18.48	2.25	56.83
36	John R. Edie	15.84	15.96	21.72	2.97	56.49
37	William T. Saunders	16.74	18.24	17.22	3.65	55.85
38	Lucius A. Bostwick	18.84	17.10	16.26	3.60	55.80
39	Franklin B. Sullivan	17.64	17.58	17.76	2.67	55.65
40	John P. J. Ryan	17.94	16.56	18.00	3.11	55.61
41	Eugene D. Ryan	16.14	15.84	19.98	3.60	55.56
42	William Y. Perry	17.40	15.36	19.38	3.15	55.29
43	Cyrus S. Radford	17.04	17.10	17.22	3.39	54.75
44	Doctor E. Dismukes	17.88	16.68	16.80	3.04	54.40
45	Frank H. Kochersperger	17.28	16.86	16.50	3.31	54.40
46	John W. Dinges	17.70	16.02	16.86	3.28	
47	Charles O. Bond	17.40	15.96	16.86	3.51	
48	Frank T. Okell	17.94	15.00	16.50	3.23	

Merit-roll of the naval cadets of the fourth class, etc.—Continued.

Order of annual merit.	NAME.	English and his-	Algebra and ge-	French and Span-	Conduct.	Aggregate.
		tory.	ometry.	ish.		
	Maxima	24	24	24	4	76
49	Julius L. Latimer	16.92	15.72	16.96	2.40	52.00
50	Frederick W. Ballachmider	17.34	15.42	15.78	3.10	51.73
51	Frank Holland	16.74	16.86	15.30	2.63	51.53
52	Erwin H. McDonald	16.62	15.30	16.80	2.60	51.32
53	Walter S. Norton	16.26	15.42	15.06	3.25	50.99
53	George C. Ward	16.20	16.26	16.86	1.27	50.59
55	Adrian L. Horne	15.66	15.42	15.06	2.93	49.07
5	Ben Le P. Coulson	15.00	15.90	14.70	3.11	48.71
5	Conrad Harnes	15.78	13.62	15.72	3.31	48.43
(d)	Will W. Leonard	(a)	(a)	(a)	3.96	.....

d Turned back.

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *Naval Cadets*.—(*Rev. Stat.*, § 1512, and *act of Congress approved August 5, 1882.*)

II. There shall be allowed at said Academy one Naval Cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and *act of Congress approved June 17, 1878.*)

III. The course of Naval Cadets is six years.—(*Rev. Stat.*, § 1520.)

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the Naval Cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. At least ten appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for Naval Cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be between the ages of fourteen and eighteen years, and physically sound, well-formed, and of robust constitution."—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examinations.

No leave of absence will be granted to Cadets of the fourth class.

ADMISSION OF CANDIDATES.

EXAMINATION.

VIII. "*All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners.*"—(*Rev. Stat.*, § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

- Feeble constitution, inherited or acquired;
- Retarded development;
- Impaired general health;
- Decided cachexia, diathesis, or predisposition;
- Any disease, deformity, or result of injury that would impair efficiency; such as—
- Weak or disordered intellect;
- Cutaneous or communicable disease;
- Unnatural curvature of spine, torticollis, or other deformity;
- Inefficiency of either of the extremities or large articulations from any cause;
- Epilepsy or other convulsions within five years;
- Impaired vision, disease of the organs of vision, imperfect color sense;
- Impaired hearing or disease of the ear;
- Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
- Impediment of speech to such an extent as to impair efficiency in the performance of duty;
- Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
- Hernia or undescended testis;
- Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
- Disease of the genito-urinary organs;
- Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the Academic Board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of a candidate.

GENERAL CHARACTER OF THE EXAMINATION.

READING AND WRITING—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write, from dictation, paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or compound, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on Arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square and cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of Arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of Arithmetic; in other words, they must possess such a complete knowledge of Arithmetic as will enable them to proceed at once to the higher branches of Mathematics without further study of Arithmetic.

ALGEBRA.—The examination in *Algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English Grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of Orthography, Etymology, and Syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; *e. g.*,

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words, thus:

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected, thus:

1. *Describe the sources from which our knowledge of these events are derived.* 2. *I sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked t*

been there and seen it. 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definition of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast-lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they empty; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and colonial possessions; locality of cities of historical, political, or commercial importance (attention is especially called to the rivers and bodies of water on which cities are situated); the course of a vessel in making a voyage between well known sea-ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, and of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with so much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and fix their position. When and by whom were these settlements made?
2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were these colonies united? What did the colony of *Pennsylvania* include? When was it divided?
3. State the leading events of the colonial wars, and give the results of each war.
4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.
5. Give an account of the formation and adoption of the Constitution.
6. Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as *Naval Cadets*, and become inmates of the Academy. Each Cadet will be required to sign articles by which he binds himself to serve in the *United States Navy* eight years (including his time of probation at the *Naval Academy*), unless sooner discharged. The pay of a *Naval Cadet* is \$500 a year, commencing at the date of his admission.

XIII. Cadets immediately after their admission will supply themselves with the following articles; viz.,

One parade suit	\$31.80	One pair gymnasium slippers	\$0.85
One undress suit	21.25	Three woolen shirts	5.40
Two working suits	2.10	*Six pairs of drawers	4.50
One overcoat	23.50	*Twelve white handkerchiefs	3.00
One rubber coat	3.15	*Eight towels	2.00
One pair of rubber leggins . . . . .	.80	Two pairs of drill gloves	1.00
Two pairs of white duck leggins	1.12	Three pairs of white thread gloves . . . . .	.81
One rubber hat . . . . .	.53	*One pair of suspenders . . . . .	.36
One parade cap	2.55	Two black silk neck-ties . . . . .	.74
One undress cap . . . . .	.67	Two clothes-bags . . . . .	.50
*One whisk . . . . .	.16	One hair mattress	5.20
*One coarse comb . . . . .	.12	One straw mattress	1.32
*One fine comb . . . . .	.30	Two pairs of high shoes	11.50
One mug . . . . .	.10	One pair of overshoes	1.33
*One cake of soap . . . . .	.10	*Eight white shirts	8.00
One soap-box . . . . .	.62	*Four night-shirts	2.60
One requisition-book . . . . .	.42	*Six undershirts	4.50
One laundry-book . . . . .	.34	Twelve linen collars	1.50
*Twelve pairs of socks	3.00	Eight pairs of cuffs	2.00
One white cap	1.50	Six pillow-cases	1.50
*One hair-brush . . . . .	.69	*One tooth-brush . . . . .	.23
One hair pillow . . . . .	.70	One looking-glass . . . . .	.95
One pair of blankets	3.75	One slop-jar	1.25
Two bedspreads	2.30	One broom . . . . .	.27
Six sheets	3.42	Two spatter-cloths	1.00
One pass-book . . . . .	.40	One jackknife . . . . .	.53
One stencil, ink, and brush . . . . .	.44	*Stationery . . . . .	.38
One bottle of indelible ink . . . . .	.18	*Thread and needles . . . . .	.19
One rug	1.20	*Shaving outfit	1.25
Hammock clews . . . . .	.40		
Bathing trunks . . . . .	.25		
One wash-basin and pitcher . . . . .	.85		
		Total	173.47

The articles marked *, not being required to conform to a standard pattern, may be brought by the Cadet from home, but all other articles must conform to the regulations, and must, therefore, be supplied by the store-keeper.

Each Naval Cadet must, on admission, deposit with the Pay Officer the sum of \$20, for which he will be credited on the books of that officer, to be expended, by direction of the Superintendent, in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All the deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing	\$173.47
Deposit for books, etc.	20.00
Total deposit required	193.47

The value of clothing brought from home is to be deducted from this amount.
Each Naval Cadet, one month after admission, will be credited with the amount of his actual expenses in traveling from his home to the Academy.

XIV. A Naval Cadet who voluntarily resigns his appointment within a year of time of his admission to the Academy will be required to refund the amount paid for traveling expenses.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Todhunter's Higher Algebra.
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
<i>English Studies History, and Law</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	2	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRANCH. The Robertsonian system; reading and translating "Le Conserit;" conjugation of verbs.	Robertson's Whole French Language. Le Conserit de 1812. Bellows's Pocket Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Mathematics.	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate co-efficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Todhunter's Higher Algebra. Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry.
English Studies, History, and Law.	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Rhetoric.
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States by notes or lectures.	Elliot's History of the United States. Mitchell's Atlas.*
Modern Languages.	15½	4	FRENCH: Course of first term continued. Friday evenings and Saturday mornings devoted to exercises in dictation, and to practice in speaking French.	Robertson's Whole French Language. Le Consacrit de 1818. Bellows's Pocket Dictionary.*
	2	4	SPANISH: The Robertsonian system. [Given as an advanced course.]	Robertson's Spanish Course.
	2	4	GERMAN: Meisterschaft system. Reading and translating German writings. [Given as an advanced course.]	The Meisterschaft system. Otto-Joynes Introductory Reader. Tauchnitz Pocket Dictionary.*

† Saturday morning period.

COURSE OF INSTRUCTION.

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigation of trigonometric formulae, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry; Todhunter's Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>	3	1	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People; Abbott's How to Write Clearly. Ayres's Orthoëpiat.* Ayres's Verballat.*
	2	2		
	2	1	HISTORY: Contemporary history, including the comparative study of governments, institutions, and political geography.	The School Herald. Martin's Statesman's Year Book. Mitchell's Atlas.*
	1	2		
	2	2	LAW: Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Modern Languages.</i>	4	4	FRENCH: Reading and translating French comedy, written translations from English into French. Themes.	Böcher's Series of French Plays. Robertson's Whole French Language.* Bellows's Dictionary.* Robertson's Spanish Course.
	1	4	SPANISH: The Robertsonian system: nautical terms and phrases, and conversations thereon, reading and translating extracts from modern authors, writing original themes. (Given as an advanced course.)	Knapp's Spanish Readings.
	1	4	GERMAN: Continuation of fourth class course: nautical terms, writing original themes. (Given as an advanced course.)	Meisterschaft system Otto-Joyner Introductory Reader. Tauchnitz Pocket Dictionary.*
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: The use of instruments; construction of scales; notation and symbols used in mechanical drawing; construction of rectilinear and curved figures to scale; drawing section lines; drawing exercises in descriptive geometry, including the projections of lines and planes, the construction of geometrical solids, and the projections and sections of surfaces and solids.	Tomlin's Machine Construction and Drawing.*

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	5	4	<p>PHYSICS: Force and motion; gravitation and molecular attraction; hydrostatics; pneumatics.</p> <p>CHEMISTRY: Aim and scope of chemistry; the atmosphere; oxygen, nitrogen, water, and hydrogen; nitric and chlorhydric acids; acids, bases, and salts; the chlorine group; sulphur and phosphorus, and their compounds; Laws of Avogadro, Charles, and Mariotte; formulas; basicity; notation and nomenclature; arsenic, antimony, and bismuth; combustion; carbon and its compounds; boron and silicon; the alkali group; the calcium group; magnesium and zinc; the sesquioxide group; copper, mercury, and tin; gold and platinum; atomic weights. Practical work in the chemical laboratory. Lectures.</p>	<p>Daniel's Physics.</p> <p>Remsen's Organic and Inorganic Chemistry. Lecture notes.</p>
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single-curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axometric projections; shades and shadows.	Church's Descriptive Geometry.
	4	4	ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of co-ordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.	C. Smith's Conic Sections; Aldis's Solid Geometry.
<i>Modern Languages.</i>	1	4	FRENCH: Oral recitations in French, upon the construction and theory of the language. Themes.	Sauveur's Grammaire Française pour les Anglais. Bellows's Dictionary.*
<i>Mechanical Drawing.</i>	†‡	4	MECHANICAL DRAWING: Representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; perspective; drawing screws, bolts, nuts, gearing, and details of gun-carriages, machinery, and engines. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single curved surfaces, and problems on the surfaces of revolution.	Tomkin's Machine Construction and Drawing.*

† Saturday morning period.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Steam Engineering.</i>	4	4	MARINE ENGINES AND BOILERS: Explanation of all the parts of an engine; types of engines; steam valves and other valves; generation of steam; distribution and expansion of steam; screw propellers and side wheels; the indicator and its diagrams; the power of an engine and computations relating to it; hydrometers; saturation; scale and its prevention; casualties; boilers; materials; combustion; transfer of heat; testing steam-engines; the principles of mechanism.	Sennett's Marine Steam-Engine. Goodeve's Elements of Mechanism.
<i>Mechanics and Applied Mathematics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubiture of volumes; rectification of curves; centers of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's Integral Calculus, and Differential Equations.
<i>Physics and Chemistry.</i>	5	4	SOUND, LIGHT, AND HEAT: Properties of sound; atmospheric and other vibrations; properties of light; optical instruments; double refraction; polarization; temperature, and its measurement by thermometers; dilatation of solids, liquids, and gases; liquefaction and solidification; production of vapor and its condensation; effect of heat upon other properties of matter, radiant heat and its reflection and radiation; theory of exchanges; conduction and convection; specific and latent heat; relation between heat and mechanical effect; thermodynamics. Lectures.	Daniel's Principles of Physics. Gannot's Physics. Balfour Stewart's Elementary Treatise on Heat.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING. Practice in drawing ordnance; ordnance accessories, and the various kinds of implements and machinery used in the naval service.	Tomkin's Machine Construction and Drawing.

THIRD YEAR—SECOND CLASS.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Steam Engineering.</i>	13½	4	Course for first term continued.	
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.
<i>Physics and Chemistry.</i>	5	4	ELECTRICITY AND MAGNETISM: Frictional electricity; magnetism; electrostatics; electromagnetics; measurement of currents; heat, light, and work from electric currents; thermoelectricity; induction currents; electrochemistry; telegraphs and telephones; electrical machines; potential; electrometers; theory of absolute measurement; specific inductive capacity; measurement of resistances; practical lessons with batteries; practical work with electrical and dynamo-machines; measurement of resistances; galvanometers; determination of dip and intensity; use of magnetometer; lectures on metallurgy and explosives; laboratory work with explosives; testing oils and paints.	Thompson's Electricity and Magnetism. Kempe's Hand-Book of Electrical Testing. Day's Exercises in Electrical Measurement. Day's Electric Light Arithmetic. Kohlrausch's Physical Measurements.
<i>English Studies, History, and Law.</i>	2	4	INTERNATIONAL LAW: The rights and duties of States; the powers and duties of diplomatic envoys, consuls, and naval commanders; nationality, as to persons and as to vessels; jurisdiction over vessels at sea and in territorial waters; the relations of ships of war at sea and in foreign ports; fugitives and deserters; the laws of war; hostile measures falling short of war; privateers; the rights and duties of neutrals; enemy's property on land and at sea; the right of search; prizes; blockade; contraband; licenses to trade; recaptures; treaty of peace.	Glass's International Law.

|| Saturday-morning period.

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	4	4	<p>SEAMANSHIP: Fitting and rigging ships for sea; rope, blocks, and tackles; wire rope and metal fittings; purchasing weights; fitting and use of ground tackle; storage; handling vessels at wharves and docking; sails; working ship under sail and under steam; repairs to rigging, spars, rudder, and all fittings in emergencies; turning experiments; fitting and management of boats; duties of officers and crew; organization of crews; drills and evolutions; rules of the road; laws of storms; general instruction upon the management of vessels of various rigs and propellers.</p> <p>NAVAL CONSTRUCTION: Wooden ship building; ship-building in iron and steel, including the various systems of framing, keels, keelsons, stems, and ram bows; sterns, plating, deck-framing, bulkheads, rudders, miscellaneous fittings, and armor plating; torpedo boats and vessels of special construction; sheathing of ships; launching; docks and docking; displacement and buoyancy of ships and considerations of water-tight decks, bulkheads, and double bottoms; stability of ships and the use of diagrams of stability; rolling and pitching of ships; water chambers and bilge keels; structural strength and strains of ships; materials for ship-building; tests of steel; resistance of ships; steering of ships; the qualities and performance of ships in general.</p> <p>NAVAL TACTICS: Tactical units and nomenclature; manœuvring groups of ships, fleet manœuvres.</p> <p>SIGNALING: Army and Navy (English Morse) code; Navy code of flag signals, International code.</p>	<p>Luce's Seamanship.</p> <p>Navy Department Pamphlets.</p> <p>Wilson's Ship Building.</p> <p>Reed's Ship Building.</p> <p>White's Manual of Naval Architecture.</p> <p>Navy and International Signal Books.</p>
Ordnance and Gunnery.	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling land howitzers and machine-guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions.</p> <p>Hand-Book of Hotchkiss Rapid-Firing Gun.</p>

FOURTH YEAR—FIRST CLASS.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
				a.
				of Ordnance cademy
				Artillery cademy
				b.
				cademy. Spherical Astron-
				ometer. ometer Alman-
				igation. igation in Dia-
				Method of b.
				plied

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	5	4	Course of the first term continued.	
Ordnance and Gunnery.	15½	6	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas (of Noble and Abel) connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-Book of Ordnance and Gunnery (Naval Academy Publication).</p> <p>The Elastic Strength of Guns (Naval Academy Publication).</p> <p>Examples in Interior Ballistics.</p> <p>Brager's Probability of Hitting an Object</p> <p>Sarran on the Effects of Powder in Guns</p>

1 Saturday period.

FOURTH YEAR—FIRST CLASS.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	5	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the derivation and transformation of the fundamental equations, the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, and of the values of the approximate and exact coefficients, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and heeling errors. Navigation.</p> <p>SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projection by development; Mercator's, Flamsteed's, and Bonne's projections; the polyconic projection of the United States Coast Survey; running surveys; portable transit instrument and zenith telescope. Astronomy.</p>	<p>Howell's Theory of the Deviations of the Compass.</p> <p>Evans's Elementary Manual for the Deviations of the Compass in Iron Ships.</p> <p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Howell's Marine Surveying.</p> <p>Projection Tables.</p> <p>Bowditch's Navigator.</p>
<i>Physiology and Hygiene.</i>	*1	4	<p>The nature of alcoholic drinks and narcotics; special instruction as to their effects upon the human system, in connection with the several divisions of the subjects of physiology and hygiene.</p>	

* One period a week taken, in rotation, from the departments of Seamanship, Gunnery, and Navigation.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics	.	.	.	.	.	.	4	5
Ordnance and Gunnery	.	.	.	.	.	.	3	5½
Astronomy, Navigation, and Surveying	.	.	.	.	.	.	6	5
Steam Engineering	.	.	.	.	4	3½	.	.
Mechanics and Applied Mathematics	.	.	.	.	5	5	3.	.
Physics and Chemiatry	.	.	.	5	5	5	.	.
Mathematics	5	5	5	5	.	.	.	.
English Studies, History and Law	5	5	5	.	.	2	.	.
Modern Languages	5	5½	4	1	.	.	.	.
Mechanical Drawing	.	.	2	4½	2	.	.	.
Physiology and Hygiene	.	.	.	.	.	.	.	1

NOTE.—The period given to Physiology and Hygiene is taken, in rotation, from the other departments.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments.	Fourth class.	Third class.	Second class.	First class.
Seamanship, Naval Construction, and Naval Tactics	.	.	.	M. T. Th. F. (3).
Ordnance and Gunnery	.	.	.	W. (3), Th. F. (2).
Astronomy, Navigation, and Surveying	.	.	.	M. T. W. Th. F. S. (1).
Steam Engineering	.	.	M. T. W. Th. (3)	.
Mechanics and Applied Mathematics	.	.	M. T. W. Th. F. (1)	M. T. W. (2).
Physics and Chemistry	.	.	M. T. W. Th. F. (2)	.
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)	.	.
English Studies, History, and Law	M. T. W. Th. F. (2)	M. T. W. Th. F. (3)	.	.
Modern Languages	M. T. W. Th. F. (3)	{ M. W. Th. S. (1), } } F. (7.30 to 9.30 p. m.).*	F. (7.30 to 9.30 p. m.).*	.
Mechanical Drawing	.	T. F. (1)	F. (3), S. (1)	.
Physiology and Hygiene	.	.	.	.

SECOND TERM.

Seamanship, Naval Construction, and Naval Tactics	.	.	.	M. T. W. Th. F. (3).
Ordnance and Gunnery	.	.	.	M. T. W. Th. F. (2), S. (1).†
Astronomy, Navigation, and Surveying	.	.	F. (7.30 to 9.30 p. m.).*	M. T. W. Th. F. (1).
Steam Engineering	.	.	W. Th. F. (3), S. (1)†	F. (7.30 to 9.30 p. m.).*
Mechanics and Applied Mathematics	.	.	M. T. W. Th. F. (1)	.
Physics and Chemistry	.	{ M. T. W. Th. F. (1), } } F. (7.30 to 9.30 p. m.).*	M. T. W. Th. F. (2)	.
Mathematics	M. T. W. Th. F. (1)	M. T. W. F. (2), Th. (3)	.	.
English Studies, History, and Law	M. T. W. Th. F. (2)	.	M. T. (3)	.
Modern Languages	{ M. T. W. Th. F. (3), S. (1)†, } } F. (7.30 to 9.30 p. m.).*	Th. (2)	.	.
Mechanical Drawing	.	M. T. W. F. (3), S. (1)†	.	.
Physiology and Hygiene	.	.	.	(See note, preceding page.)

* Lectures and practical instruction.

† Saturday period, second term, from January 31 to March 10.

TABLE OF COEFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class.	Maxima for four years.	Maxima for final graduation.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>						
Seamanship, Ship Building, and Naval Tactics . . . . .	.	.	.	23	92	92
Cruise Reports, Journals, and Testimonials . . . . .	.	.	.	.	.	12
<i>Ordnance and Gunnery.</i>						
Ordnance Instructions, Infantry Tactics, and Gunnery. . . . .	.	.	.	*19	76	48
Ordnance and Gunnery . . . . .	.	.	.
<i>Astronomy, Navigation, and Surveying.</i>						
Astronomy, Surveying, Theory of Navigation, Practical Navigation, and Theory of Compass Deviation . . . . .	.	.	.	19	76	48
<i>Steam Engineering.</i>						
Steam Machinery, Marine Engines, and Boilers . . . . .	.	.	18			
Practical Instruction in Steam . . . . .	.	.	.	2	80	48
<i>Mechanics and Applied Mathematics.</i>						
Differential and Integral Calculus, and Mechanics . . . . .	.	.	14			
Least Squares and Strength of Materials . . . . .	.	.	.	5	76	
<i>Physics and Chemistry.</i>						
Chemistry . . . . .	.	6				
Sound, Light, and Heat . . . . .	.	.	7			
Electricity and Magnetism . . . . .	.	.	7	.	80	
<i>Mathematics.</i>						
Algebra and Geometry	6					
Trigonometry, Analytical Geometry, and Descriptive Geometry . . . . .	.	12	.	.	72	
<i>English Studies, History, and Law.</i>						
English and History	6					
English, History, and Law . . . . .	.	6				
International Law . . . . .	.	.	4	.	64	
<i>Modern Languages.</i>						
French, Spanish, and German	6					
French, Spanish, and German . . . . .	.	16	.	.	48	24
<i>Mechanical Drawing.</i>						
Mechanical Drawing . . . . .	.	6	4	.	40	
<i>Miscellaneous</i>						
Physiology and Hygiene . . . . .	.	.	.	3	12	
Conduct	1	2	3	5	44	
Maxima for each class	76	152	228	304	768	240

*In making up the standing for a year, the second term is given double the weight of the first term.
!In making up the standing for the year, the first term is given double the weight of the second term.
; In making up the standing for the year, the second term is given five times the weight of the first term.
Deductions for each demerit, 0.012 0.032, 0.06, 0 123.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy codes; management of steam launches; steam fleet-tactics (with steam launches).

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal, with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; and from these observations finding the approximate and the exact coefficient and the horizontal and vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors (motive and turret).

COURSE OF INSTRUCTION.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics	.	.	.	.	.	.	4	5
Ordnance and Gunnery	.	.	.	.	.	.	3	5½
Astronomy, Navigation, and Surveying	.	.	.	.	.	.	6	5
Steam Engineering	.	.	.	.	4	3½	.	.
Mechanics and Applied Mathematics	.	.	.	.	5	5	3.	.
Physics and Chemistry	.	.	.	5	5	5	.	.
Mathematics	6	5	5	5	.	.	.	.
English Studies, History and Law	5	5	5	.	.	2	.	.
Modern Languages	5	5½	4	1	.	.	.	.
Mechanical Drawing	.	.	2	4½	2	.	.	.
Physiology and Hygiene	.	.	.	.	.	.	.	1

NOTE.—The period given to Physiology and Hygiene is taken, in rotation, from the other departments.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy codes; management of steam launches; steam fleet-tactics (with steam launches).

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal, with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; and from these observations finding the approximate and the exact coefficient and the horizontal and vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors (motive and turret).

PROGRAMME.OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parentheses.

FIRST CLASS.

Months.	Weeks.	First Division.	Second Division.	Third Division.	Fourth Division.
Oct	1	Company (4). Monitor (1).	Battery (4). Monitor (1).	Target great guns(4). Monitor (1).	Steam tactics (4). Monitor (1).
	2	Battery (4). Monitor (1).	Company (4). Monitor (1).	Steam tactics (4). Monitor (1).	Target great guns(4). Monitor (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns(4). Monitor (1).	Steam tactics (4). Monitor (1).	Company (4). Monitor (1).	Battery (4). Monitor (1).
Nov	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam tactics (4). Monitor (1).	Target great guns(4). Monitor (1).	Battery (4). Monitor (1).	Company (4). Monitor (1).
	3	Battal'n infantry (4). Monitor (1).	Battal'n infantry (4). Monitor (1).	Battal'n infantry (4). Monitor (1).	Battal'n infan'ry (4). Monitor (1).
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec	1	Broad sword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Broad sword.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Broad sword.	Steam.
	4				
Jan ..	1	Steam.	Practical ordnance.	Steam.	Broad sword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.

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SEMI-ANNUAL EXAMINATION.

Feb.	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broad sword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broad sword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broad sword.	Steam.
Mar ..	1	Steam.	Seamanship.	Steam.	Broad sword.
	2	Deviat'n compass(4). Seamanship (1).	Deviat'n compass(4). Seamanship (1).	Deviat'n compass(4). Seamanship (1).	Deviat'n compass(4). Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	General quarters.	General quarters.	General quarters.	General quarters.
Apr	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4). General quarters (1).	Skirmish (4). Target great guns(4). General quarters (1).	Steam tactics (4). General quarters (1).	Torpedoes (4). General quarters (1).
	3	Skirmish (4). Seamanship (1).	Target great guns(4). Seamanship (1).	Torpedoes (4). Seamanship (1).	Steam tactics (4). Seamanship (1).
	4	Steam tactics (4). Seamanship (1).	Torpedoes (4). Seamanship (1).	Target great guns(4). Seamanship (1).	Skirmish (4). Seamanship (1).
May	1	Torpedoes (4). General quarters (1).	Steam tactics (4). General quarters (1).	Skirmish (4). General quarters (1).	Target great guns(4). General quarters (1).
	2	Battal'n infantry (4). Seamanship (1).	Battal'n infantry (4). Seamanship (1).	Battal'n infantry (4). Seamanship (1).	Battal'n infantry (4). Seamanship (1).
	3	Battal'n artillery (2). Seamanship (3).	Battal'n artillery (2). Seamanship (3).	Battal'n artillery (2). Seamanship (3).	Battal'n artillery (2). Seamanship (3).
	4	Steam tactics (3). General quarters (2).	Steam tactics (3). General quarters (2).	Steam tactics (3). General quarters (2).	Steam tactics (3). General quarters (2).
	5				
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	General quarters.	General quarters.	General quarters.	General quarters.
	Th	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to 10 }

ANNUAL EXAMINATION.

June 10 to 20 } Practice cruise.
 Aug 20 }
 Sept On leave

SECOND CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Pivot guns.	Steam launches.
	2	Battery.	Company.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Steam launches.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
Jan.....	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar.....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	General quarters.	General quarters.	General quarters.	General quarters.
Apr.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4).	Skirmish (4).	Steam tactics (4).	Target machine guns (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
		Skirmish (4).	Target great guns(4).	Target machine guns (4).	Steam tactics (4).
	4	Seamanship (1).	Seamanship(1).	Seamanship (1).	Seamanship (1).
		Steam tactics (4).	Target machine guns (4).	Target great guns(4).	Skirmish (4).
May.....	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
		Target machine guns (4).	Steam tactics (4).	Skirmish (4).	Target great guns(4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
		Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
		Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	4	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
		Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
(Fifth week.)	M.	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
	T.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	W.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	Th.	General quarters.	General quarters.	General quarters.	General quarters.
	F.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	S.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
		Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10	ANNUAL EXAMINATION.				

PROGRAMME.OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Months.	Weeks.	First Division.	Second Division.	Third Division.	Fourth Division.
Oct	1	Company (4).	Battery (4).	Target great guns(4).	Steam tactics (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	2	Battery (4).	Company (4).	Steam tactics (4).	Target great guns(4)
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns(4).	Steam tactics (4).	Company (4).	Battery (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam tactics (4).	Target great guns(4).	Battery (4).	Company (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec ...	1	Broad sword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Broad sword.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Broad sword.	Steam.
	4				
Jan	1	Steam.	Practical ordnance.	Steam.	Broad sword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance
	4	Practical ordnance.	Steam.	Small sword.	Steam.

5

SEMI-ANNUAL EXAMINATION.

Feb ...	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broad sword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broad sword.	Steam.	Seamanship
	4	Seamanship.	Steam.	Broad sword.	Steam.
Mar ..	1	Steam.	Seamanship.	Steam.	Broad sword.
	2	Deviat'n compass(4).	Deviat'n compass(4).	Deviat'n compass(4).	Deviat'n compass(4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Apr	4	(General quarters.	(General quarters.	General quarters.	(General quarters
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
		(General quarters (1).	General quarters (1).	General quarters (1).	(General quarters (1)
	3	Skirmish (4).	Target great guns(4).	Torpedoes (4).	Steam tactics (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Steam tactics (4).	Torpedoes (4).	Target great guns(4).	Skirmish (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
May	1	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns(4)
		(General quarters (1).	(General quarters (1).	General quarters (1).	General quarters (1)
	2	Battal'n infantry (4).	Battal u infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
		Seamanship (1).	Seamanship (1)	Seamanship (1).	Seamanship (1).
	3	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'u artillery (2).
		Seamanship (3).	Seamanship (3)	Seamanship (3).	Seamanship (3).
	4	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
		(General quarters (2)	General quarters (2).	General quarters (2).	(General quarters (2)
	5				
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery
	W	(General quarters.	(General quarters.	(General quarters.	(General quarters.
	Th	Steam tactics.	Steam tactics.	Steam tactics	Steam tactics.
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to }
10 . }

ANNUAL EXAMINATION.

June 10 }
10 } Practice cruises.
Aug 20 }
Sept ... } On leave.

SECOND CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Pivot guns.	Steam launches.
	2	Battery.	Company.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Steam launches.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
Jan.....	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar.....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Apr.....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Target machine guns (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May.....	1	Skirmish (4).	Target great guns (4).	Target machine guns (4).	Steam tactics (4).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Steam tactics (4).	Target machine guns (4).	Target great guns (4).	Skirmish (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
(Fifth week.)	1	Target machine guns (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	1	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	2	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	3	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	4	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10	ANNUAL EXAMINATION.				

SECOND CLASS.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navysignals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.
	2	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers, afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.
	3	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.
	4	Running steam-cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Navysignals; Army signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine-guns.
	5	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	6	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.
	7	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.
	8	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.
	9	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.
	10	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
Sept.	1	On leave.	On leave.	On leave.	On leave.
	2				
	3				
	4				

THIRD CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Pivot guns.	Boats.
	2	Battery.	Company.	Boats.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Boats.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan.....	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Target small arms.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar.....	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
Apr.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target small arms (4).	Skirmish (4).	Seamanship (4).	Boat (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target small arms (4).	Boats (4).	Seamanship.
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship.
	6	Seamanship.	Boats (4).	Target small arms (4).	Skirmish (4).
May.....	1	Boats (4).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
	8	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(Fifth week.)	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10.	ANNUAL EXAMINATION.				
June 10 to Aug. 28.	Practice cruise.				
Sept.....	On leave.				

COURSE OF INSTRUCTION.

FOURTH CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Gymnastica.	Boats.
	2	Battery.	Company.	Boats.	Gymnastica.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Gymnastica.	Boats.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Gymnastica.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec....	1	Dancing.	Gymnastica.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastica.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Dancing.	Gymnastica.
	4				
Jan.....	1	Gymnastica.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastica.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastica.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastica.

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SEMI-ANNUAL EXAMINATION.

Feb....	1	Gymnastica.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastica.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastica.	Dancing.
	4	Dancing.	Rigging loft.	Dancing.	Gymnastica.
Mar....	1	Gymnastica.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	5	General quarters.	General quarters.	General quarters.	General quarters.
Apr....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Rigging loft (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Rigging loft (4).	Boats (4).	Seamanship.
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	
	6	Seamanship.	Boats (4).	Rigging loft (4).	Skirmish (4).
May....	1	Boats (4).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	General quarters (1).	Seamanship (4).	Skirmish (4).	Rigging loft (4).
	3	Battalion infantry (4).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Seamanship (1).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	5	Battalion artillery (2).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Seamanship (3).	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	General quarters (2).	Seamanship (3).	Seamanship (3).	Seamanship (3).
(Fifth week.)	M.	Battalion infantry.	General quarters (2).	General quarters (2).	General quarters (2).
	T.	Battalion artillery.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	W.	General quarters.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	Th.	Boats.	General quarters.	General quarters.	General quarters.
	F.	Battalion infantry.	Boats.	Boats.	Boats.
	S.	Seamanship.	Battalion infantry.	Battalion infantry.	Battalion infantry.
			Seamanship.	Seamanship.	Seamanship.

June 1 to 10.

ANNUAL EXAMINATION.

June 10 to Aug. 20.

Sept....

Practice cruises.

1	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
2	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
3	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
4	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
5	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
6	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.

* Swimming daily.

SUMMARY OF PRACTICAL INSTRUCTIONS.

COURSE OF INSTRUCTION.

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Kind of instruction.	During the academic year.		Total number of instructions during academic year.	During summer months.			During month of September, fourth class.	Total number of instructions, exclusive of practice cruises.
	First class.	Second class.		First class.	Second class.	Third class.	Fourth class.	
Seamanship, including stripping and rigging <i>Wyoming</i>	23	23	138	(*)	.	(*)	(*)	138
Rigging loft	.	.	24	.	.	.	.	24
Boats under oars, or sail	.	.	20	(*)	15	(*)	(*)	25
Naval tactics with steam launches	12	8	20	.	5	.	.	25
Navy signals, day	.	5	5	(*)	3	.	.	8
Navy signals, night	.	.	.	(*)	3	.	.	3
Army signals, day	.	.	5	.	3	.	.	7
Army signals, night	.	.	.	.	3	.	.	3
Monitor, with great gun practice	5	.	5	.	.	.	.	5
General quarters	6	6	24	(*)	.	(*)	(*)	24
General quarters, with target practice	4	4	16	(*)	.	(*)	(*)	16
Target practice, great guns	6	4	12	.	5	.	.	17
Pivot guns	.	5	14	.	.	.	.	14
Broadside guns	.	.	20	(*)	.	(*)	(*)	20
Mortars	.	.	.	.	5	.	.	5
Torpedoes	4	.	4	.	.	.	.	4
Practical ordnance	10	5	15	.	.	.	.	15
Howitzers afloat	.	.	.	.	5	.	.	5
Target practice, howitzers	.	.	.	.	5	.	.	5
School of section	.	.	.	.	.	.	.	10
School of battery	4	5	19	.	.	.	.	19
School of battalion artillery	8	8	23	.	.	.	.	23
Target practice, machine guns	.	4	4	.	5	.	.	9
Target practice, small-arms	.	.	9	.	.	.	.	9
Target practice, pistols	.	5	5	.	.	.	.	5
Vol of the soldier	.	.	.	.	.	.	24	24

SUMMARY OF PRACTICAL INSTRUCTIONS—Continued.

Kind of instruction.	During the academic year.				Total num- ber of in- structions during academic year.	During summer months.				Total num- ber of in- structions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the company	4	5	5	9	23	.	.	.	.	23
School of the battalion, infantry	10	11	11	11	43	.	.	.	.	43
Platoon drill	4	4	4	4	16	.	.	.	.	16
Broad sword	10	9	.	.	19	.	.	.	.	19
Small sword	5	10	13	.	28	.	.	.	.	28
Practical instruction in operation of compass	4	.	.	.	4	(*)	.	.	.	4
Practical instruction, navigation	114	113	.	.	.	(*)	.	.	.	127
Practical instruction, surveying	110	.	.	.	.	.	.	.	.	110
Machinabop and running ship engine	30 and 113	30	.	.	60	.	54	.	.	114 and 113
Running steam launches . . . . .	.	5	.	.	5	.	6	.	.	11
Practical instruction in chemistry . . . . .	.	.	113	.	.	.	.	.	.	113
Gymnastics . . . . .	.	.	.	20	20	.	.	.	.	20
Swimming . . . . .	.	.	.	.	.	.	.	.	24	24
Boating . . . . .	.	.	.	20	20	.	.	.	.	20
* Practice cruises.						† Study periods.				

The instructions in seamanship and gunnery on board of the *Wyoming*, *Passaic*, and *Albatross* are also made instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY.

ANNAPOLIS, MD.

THIRTY-NINTH ACADEMIC YEAR.

1888-'89.

**WASHINGTON:
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1889.**

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10, of that year, under the name of the Naval School, with Commander Franklin Buchanan as Superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first and the last were spent at the School, the intervening three being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the School, the students consisted of 36 Midshipmen, of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 Acting Midshipmen, appointed since September of the previous year. The Midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates, until the reorganization of the School, in 1850.

In September, 1849, a Board was appointed to revise the plan and regulations of the Naval School. The Board was composed of the following officers:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the Board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the School and the three intermediate years at sea. The School was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments, with executive heads, was fully adopted. It was provided that a Board of Visitors should make an annual inspection of the Academy, and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice-ship, and the annual practice-cruises were begun.

After the system had been in operation a year, new changes were proposed, and the recommendations of the Academic Board on the subject were referred to the Board of Examiners for the year 1851, composed of the following officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the Board of Examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea-service in the middle of the course, thus making the four years of study consecutive. The practice-cruise supplied the place of the omitted sea-service, and gave better op

tunities of training. The change went into operation in November, 1851, together with other improvements recommended by the Board. The system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining Acting Midshipmen were quartered in the Atlantic House and on board the frigates "Constitution" and "Santee." In the summer of 1865 the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, all official connection with the Bureau came to an end.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of Acting Third-Assistant Engineers was ordered to the Academy for instruction. The course embraced the subjects of steam-engineering, mechanism, chemistry, and mechanics, and practical exercises with the steam-engine and in the machine-shop. This class was graduated in June, 1868, together with two Cadet-Engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of Cadet-Engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 21, 1874, the course of instruction for Cadet-Engineers was made four years instead of two; and the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of Cadet-Midshipmen or Cadet-Engineers at the Naval Academy, but in lieu thereof Naval Cadets shall be appointed from each Congressional district and at large, as now provided by law for Cadet-Midshipmen, and all the undergraduates at the Naval Academy shall thereafter be designated and called 'Naval Cadets'; and, from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps: *And provided further,* That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year, such appointments to be made from the graduates of the year at the conclusion of their six years' course, in order of merit, as determined by the Academic Board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the Academic Board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year 1882. And if there be a surplus of graduates, those who did not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea-pay, as now provided by law for Cadet-Midshipmen; and so much of section 1521 of the Revised Statutes as is inconsistent herewith is hereby repealed."

"That any Cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command :

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Upshur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.

BOARD OF VISITORS, JUNE, 1888.

Rear-Admiral C. R. P. RODGERS, U. S. Navy, *President.*

Hon. E. C. WALTHALL, U. S. Senate, *Vice-President.*

Hon. A. S. PADDOCK U. S. Senate.
Hon. WILLIAM MCADOO House of Representatives.
Hon. GEORGE D. WISE House of Representatives.
Hon. CHARLES A. ROUTELLE House of Representatives.
Hon. J. PROCTOR KNOTT Lebanon, Kentucky.
Dr. J. W. BROWN Camden, Arkansas.
Professor J. P. BLANTON President of State Normal College, Missouri.
Col. F. J. CRILLY Philadelphia, Pennsylvania.
Rev. JOHN HALL, D. D. New York City.
S. P. GILFILL, Esq. Evansville, Indiana.

OFFICERS

ATTACHED TO THE

UNITED STATES NAVAL ACADEMY.

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COMMANDER W. T. SAMPSON.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT E. K. MOORE.

Commandant of Cadets,

COMMANDER P. F. HARRINGTON.

Assistants to the Commandant of Cadets,

LIEUTENANT-COMMANDER C. C. TODD,
LIEUTENANT W. P. POTTER,
LIEUTENANT G. B. HARDER,
LIEUTENANT DAVID DANIELS.

SEAMANSHIP, NAVAL TACTICS, AND NAVAL CONSTRUCTION.

Head of Department,

COMMANDER C. D. SIGSBEE.

Assistants,

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LIEUTENANT H. McUREA,
ASSISTANT NAVAL CONSTRUCTOR R. GATEWOOD,
LIEUTENANT T. M. POTTS,
ASSISTANT NAVAL CONSTRUCTOR A. M. STAHL, M. E.

Instructor in Boxing, Swimming, and Gymnastics,

MATTHEW STROHM.

ORDNANCE AND GUNNERY.

Head of Department,

LIEUTENANT-COMMANDER C. S. SPERRY.

Instructors,

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 ENSIGN F. J. HARBELER,
 ENSIGN M. K. EYER.

Record-Master,

A. J. CORNWELL.

Assistant Record-Masters,

J. B. REIZ,
 G. HEINTZ.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Head of Department,

LIEUTENANT-COMMANDER A. WALKER.

Instructors,

LIEUTENANT-COMMANDER W. I. SAUNDERS,
 LIEUTENANT W. F. LOW,
 ENSIGN W. C. P. MUIR.

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Head of Department,

CHIEF ENGINEER H. W. FITCH

Instructors,

PAID ASSISTANT ENGINEER R. W. MULLAN,
 PAID ASSISTANT ENGINEER J. S. OGDEN,
 PAID ASSISTANT ENGINEER W. B. KENY,
 PAID ASSISTANT ENGINEER F. H. EDELL,
 ASSISTANT ENGINEER F. H. S. OGDEN.

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Head of Department,

PROFESSOR J. M. BUCKLEY, Ph.D.

Instructors,

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 LIEUTENANT A. M. OGDEN, Ph.D.,
 LIEUTENANT J. OGDEN,
 LIEUTENANT F. OGDEN.

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LIEUTENANT W. G. CUTLER,

LIEUTENANT O. G. DODGE,

ENSIGN R. H. MINER,

ENSIGN S. MORGAN,

PROFESSOR C. R. SANGER, A. M., PH. D.

MATHEMATICS.

Head of Department,

PROFESSOR W. W. HENDRICKSON.

Assistants,

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LIEUTENANT H. H. HOSLEY,

LIEUTENANT J. M. ORCHARD,

ENSIGN C. N. ATWATER,

ENSIGN H. G. DRESEL,

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LIEUTENANT J. B. BRIGGS,

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ENSIGN W. G. RICHARDSON,

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ASSISTANT PROFESSOR H. MARION.

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PASSED-ASSISTANT SURGEON D. O. LEWIS, M. D.,

PASSED-ASSISTANT SURGEON J. D. GATWOOD, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

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ASSISTANT SURGEON T. A. BERRYHILL, M. D.

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BOATSWAIN J. R. SINCLAIR

GUNNER R. KORMERS,

CARPENTER G. W. CONGER.

MATES

Attached to the Sloop, the Monitor, and the Pilot.

N. GIER,

H. G. PERRY,

C. J. MURPHY,

W. G. SMITH.

MARINE OFFICERS

CAPTAIN H. A. BARTLETT, *Commanding Marines.*

CAPTAIN J. M. T. YOUNG,

FIRST LIEUTENANT G. T. BATES.

ACADEMIC BOARD.

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THE COMMANDANT OF CADRE

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL TACTICS, AND NAVAL CONSTRUCTION

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY

THE HEAD OF THE DEPARTMENT OF MATHEMATICS

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE

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A. B. HOFF,****S. E. KITTELLE,
G. L. FERNIER.****CADET-MASTER AND ADJUTANT.****B. S. NEUMANN.****CADET-MASTERS.****N. C. TWINING,
B. F. HUTCHISON,****G. R. MARVELL,
L. M. NULTON.****CADET-ENSIGNS.****W. V. PRATT,
L. C. LUCAS,****J. B. PATTON,
J. PROCHAZKA.***Cadet-petty-officers of the first class.***G. C. LONG,
W. W. PHELPS,
R. E. CARNEY,
G. W. DANFORTH,****W. D. MACDOUGALL,
C. A. BRAND,
E. B. ANDERSON,
G. G. MITCHELL,****R. M. DUTTON,
W. C. COLE,
K. R. LOWNDER,
T. P. MAGRUDER.***Cadet-petty-officers of the second class.***H. J. ZIEGEMEIER,
F. H. SCHOFIELD,
C. T. VOGELGESANG,
W. A. SNOW,****C. B. MCVAY,
N. T. COLEMAN,
W. A. MOFFETT,
L. SPEAR,****C. DAVIS,
W. H. BUCK,
J. M. BLANKENSHIP,
J. V. CHASE.****SUMMER CRUISE, 1888.****OFFICERS AND NAVAL CADETS.****UNITED STATES PRACTICE-SHIP CONSTELLATION.**

COMMANDER P. F. HARRINGTON, Commanding.
LIEUTENANT-COMMANDER C. C. TODD, Executive Officer.
LIEUTENANT G. P. COLVOCORESSES, Navigator.
LIEUTENANT C. E. OOLAHAN, Watch Officer.
LIEUTENANT H. MCCREA, Watch Officer.
LIEUTENANT H. H. HOSLEY, Watch Officer.
LIEUTENANT R. M. DOYLE, Watch Officer.
ENSIGN C. N. ATWATER, Watch Officer.
ENSIGN W. C. P. MUIR, Instructor in Navigation.
SURGEON M. H. SIMON.
PASSED-ASSISTANT SURGEON A. C. H. RUSSELL.
ASSISTANT PAYMASTER W. B. WILCOX.
CHAPLAIN E. K. RAWSON.

Fourth Class—Continued.

Everhart,	Neville,	Signor,
Gartley,	Price,	Snow,
Gibbs, G. F.,	Radford,	Spear,
Holmes,	Rising,	Sullivan,
Kochersperger,	Ritter,	Taylor,
Latimer,	Ruhm,	Treadwell,
McDonald,	Ryan, E. D.,	Vogelgesang,
McVay,	Ryan, J. P. J.,	Williams, G. W.,
Moffett,	Saunders,	Ziegemeier.
Moses, L. H.,	Schofield,	

SUMMARY.

On board United States practice-ship <i>Constellation</i>	142
On board United States ship <i>Santee</i>	44
Total.....	186

SYNOPSIS OF THE CRUISE.

CONSTELLATION.

Commissioned June 1, 1888.
Cadets embarked June 9, 1888.
Sailed from Annapolis June 14, 1888.
Went to sea June 21, 1888.
Arrived in Gardiner's Bay June 23.
Cruised in Long Island Sound, between New London, Conn., Newport, R. I., and Gardiner's Bay until August 18.
Arrived in Hampton Roads August 23, and at Annapolis August 29.
Cadets disembarked August 29.

RELATIVE STANDING OF NAVAL CADETS AT THE ANNUAL EXAMINATION, JUNE, 1888.

P denotes physically disqualified for the naval service.

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

a denotes absence from examination.

Class of naval cadets appointed 1883, performing required service afloat.

Order of merit.	Name	State from which appointed.	Date of admission.
*1	Stocker, Robert	Minnesota	Sept. 4, 1883
*2	Hibbs, Frank Warren	Minnesota	Sept. 4, 1883
*3	Snow, Elliot	Utah Territory	Sept. 4, 1883
4	Decker, Benton Clark	Illinois	May 17, 1883
5	Bristol, Mark Lambert	New Jersey	May 19, 1883
6	Wells, Benjamin Warner, jr	Illinois	May 17, 1883
7	McCully, Newton Alexander, jr	South Carolina	May 19, 1883
8	Burke, Walter Safford	Illinois	May 17, 1883
9	Cloke, William Snelling	New Jersey	May 17, 1883
10	Stearns, Ben Wade	Iowa	May 17, 1883
11	Bertolette, Levi Calvin	Delaware	Sept. 4, 1883
12	Hurlbut, Samuel Ray	Connecticut	Sept. 4, 1883
13	Moale, Edward, jr	Montana	June 17, 1882
14	Bryan, Henry Francis	Ohio	May 2, 1883
15	McMillan, William Graham	North Carolina	Sept. 4, 1883
16	Durell, Edward Hovey	Massachusetts	May 17, 1883
17	Logan, George Wood	Ohio	Sept. 3, 1883
18	Long, Andrew Theodore	North Carolina	May 17, 1883
19	Brown, Ford Hopkins	Iowa	May 17, 1883
20	Peckham, Henry Lincoln	Rhode Island	May 17, 1883
21	Washington, Thomas	North Carolina	May 17, 1883
22	Scales, Archibald Henderson	North Carolina	May 19, 1883
23	Stone, Clarence Morton	Indiana	Sept. 25, 1883
24	Churchill, Creighton	Missouri	Sept. 4, 1883
25	Davis, Archibald Hilliard	North Carolina	May 17, 1883
26	Johnston, Charles Ernest	Ohio	May 17, 1883
27	Draper, Herbert Lemuel	Kansas	Sept. 6, 1883
28	Boughter, Francis	Pennsylvania	May 17, 1883
29	Blue, Victor	South Carolina	Sept. 6, 1883
30	Pigott, Michael Royston	Massachusetts	Sept. 20, 1883
31	Edmonds, Samuel Preston	Missouri	May 19, 1883
32	Burrage, Guy Hamilton	Massachusetts	Sept. 6, 1883
33	Russell, Frank Mead	Pennsylvania	May 19, 1883
34	Allen, Henry Asa	Wisconsin	Sept. 4, 1883
35	Jackson, Richard Harrison	Alabama	June 4, 1883
36	Swanstrom, Frederick Emil	Minnesota	Sept. 6, 1883
37	Cochran, Claude Stanley	Ohio	Sept. 4, 1883
38	Ballinger, James Grey	Kansas	Sept. 6, 1883
39	Craig, Collin Samuel	Iowa	May 17, 1883
40	Hudson, Charles Edward	Arkansas	Sept. 4, 1883
41	Moseley, William Branch	Texas	Sept. 6, 1883
42	Young, Louis le Sasser	Louisiana	Sept. 6, 1883
43	O'Halloran, Thomas Michael	Pennsylvania	May 17, 1883

RELATIVE STANDING,

Class appointed in 1884, 35 members,

Order of general merit.

	Name.	State.	Date of admission.
1	Vassant, William Newton	Pennsylvania	Sept. 4, 1884
2	Marble, Frank	New York	Sept. 4, 1884
3	Wilbur, Curtis Dwight	Dakota	May 19, 1884
4	Robertson, Ashley Herman	Illinois	Sept. 4, 1884
5	Brittain, Carlo Bonaparte	Kentucky	May 19, 1884
6	Morgan, Casey Bruce	Mississippi	Sept. 4, 1884
7	Crowe, William Michael	Indiana	May 19, 1884
8	Miller, Marcus Lyon	Massachusetts	Sept. 4, 1884
9	Hayward, George North	New York	May 19, 1884
10	Koster, Oscar William	Pennsylvania	April 5, 1884
11	Brewick, Delworth Wilson	Michigan	May 20, 1884
12	Hubbard, John Flavel	New York	Sept. 5, 1884
13	Lejeune, John Arthur	Louisiana	May 19, 1884
14	Robinson, Samuel Shelburn	Pennsylvania	Sept. 4, 1884
15	Chandler, Lloyd Horwitz	New Hampshire	Sept. 4, 1884
16	Hartnath, Arnon	Michigan	Sept. 4, 1884
17	Ingate, Clarence Louis Adrian	Alabama	May 20, 1884
18	Benham, Henry Kennedy	New York	May 19, 1884
19	West, Ernest Edward	Georgia	May 23, 1884
20	Hughes, Charles Frederic	Maine	Sept. 6, 1884
21	Norton, Albert Leland	Ohio	May 23, 1884
22	Stafford, Leroy Augustus	Louisiana	Sept. 15, 1884
23	Aiken, Samuel James	Tennessee	Sept. 4, 1884
24	Cole, Eli Kelley	New York	Sept. 4, 1884
25	Anderson, Louis Joseph	Georgia	May 27, 1884
26	Franklin, William Baell	Maryland	May 20, 1884
27	Roid, James Henry	Virginia	Sept. 4, 1884
28	Cramer, Stuart Warren	Illinois	Sept. 4, 1884
29	Stukely, Herman Osman	Kentucky	Sept. 4, 1884
30	Donah, Edward Latimer	Minnesota	May 20, 1884
31	Bassett, Frederick Brewster, jr	New York	May 19, 1884
32	Gatre, Herbert Grenville	Michigan	Sept. 4, 1884
33	Monroe, Moses Daniel	New York	May 19, 1884
34	Wiley, Henry Aristo	Texas	May 17, 1884
35	Kane, Theodore Porter	New York	May 19, 1884

performing required service afloat.

Age at date of admission.		Order of merit in—								Sea service in practice-ships.			
Years.	Months.	Astronomy, navigation, and surveying.	Method of least squares, and strength of materials.	Ordnance and gunnery.	Seamanship, ship-building, and naval tactics.	Practical seamanship.	Practical instruction in steam engineering.	Physiology and hygiene.	Conduct.	Number of demerits.	Months.	Days.	Order of general merit.
15	6	1	1	1	1	1	11	1	12	22	5	8	1
17	0	2	2	2	12	1	13	5	13	25	5	8	2
17	5	4	4	3	7	5	5	7	2	5	6	20	3
16	8	4	8	7	4	13	3	13	24	52	5	8	4
17	4	6	6	4	3	4	1	11	1	0	7	20	5
16	10	7	9	5	5	12	13	8	29	69	5	8	6
17	3	9	26	17	10	6	27	13	19	32	7	20	7
17	11	20	25	21	18	32	17	28	14	27	5	8	8
17	11	22	24	8	7	8	32	9	34	132	7	20	9
17	10	9	10	12	6	10	11	31	8	13	7	20	10
15	8	18	14	22	13	22	16	22	2	5	7	20	11
17	2	12	15	15	11	10	32	3	28	67	5	8	12
17	4	12	12	15	15	30	27	10	22	40	7	20	13
17	3	16	7	14	20	8	2	16	11	18	5	8	14
15	0	14	29	10	2	3	3	2	5	6	5	8	15
16	0	8	5	8	14	22	20	4	35	143	5	8	16
16	4	15	16	11	15	16	24	16	6	7	7	20	17
16	9	22	13	18	24	28	20	15	16	29	7	20	18
16	10	21	11	23	24	26	8	18	20	33	5	5	19
17	10	17	30	13	9	6	8	12	7	8	5	8	20
17	11	24	17	27	19	18	13	6	10	16	7	20	21
14	9	3	8	5	27	18	17	24	24	52	5	8	22
17	7	9	18	19	21	14	8	26	2	5	5	8	23
16	0	18	27	19	22	21	20	19	16	29	7	14	24
17	10	31	33	27	27	31	5	33	33	99	7	20	25
16	3	27	20	30	24	17	29	26	26	58	7	20	26
14	9	33	27	24	33	32	35	35	15	28	5	8	27
16	5	24	21	26	34	26	29	22	18	30	5	8	28
16	8	26	34	32	29	29	5	25	9	15	5	8	29
16	10	32	19	31	31	34	24	28	23	42	7	20	30
15	4	27	30	33	35	24	34	21	26	58	7	20	31
17	4	34	32	29	23	25	29	20	30	89	5	8	32
17	7	27	35	34	30	35	20	30	32	94	7	20	33
16	3	34	21	35	31	18	24	32	21	34	7	9	34
15	2	27	21	24	17	14	17	33	31	92	7	20	35

First class—

Order of merit	Name.	State.	Date of admission.
34	Anderson, Ernest Bentley	Kentucky	May 22, 1885
13	Brashaw, George Brown	Texas	Sept. 4, 1885
29	Brand, Charles Augustine	Connecticut	Sept. 8, 1885
27	Carney, Robert Ernest	Wisconsin	May 21, 1885
22	Cole, William Carey	Illinois	Sept. 5, 1885
7	Danforth, George Washington	Missouri	Sept. 7, 1885
1	Driggs, Louis Lathelle	Nebraska	Sept. 29, 1885
32	Dutton, Robert McMillan	California	Sept. 4, 1885
31	Fernier, George Lucien	Indiana	May 21, 1885
28	Fuller, Ben Howard	Michigan	May 22, 1885
20	Harrison, William Kelley	Texas	May 21, 1885
41	Hobson, Richmond Pearson	Alabama	May 21, 1885
3	Hoff, Arthur Bainbridge	At large	Sept. 29, 1885
6	Hutchinson, Benjamin Franklin	Missouri	Sept. 6, 1885
17	Kaher, Louis Anthony	Illinois	May 20, 1885
†	Kirk, George William	Missouri	Sept. 7, 1885
9	Kittelle, Sumner Elv	New York	May 19, 1885
21	Long, Charles Grant	Massachusetts	Sept. 7, 1885
15	Lowndes, Edward Rutledge	Michigan	Sept. 29, 1885
11	Lucas, Lewis Clarke	Ohio	Sept. 9, 1885
16	MacDougall, William Dugald	New York	May 19, 1885
26	Magruder, Thomas Pickett	Mississippi	Sept. 3, 1885
11	Marvell, George Ralph	Massachusetts	Sept. 7, 1885
24	Mitchell, George Grant	Indiana	Sept. 7, 1885
12	Neumann, Bertram Standbury	New Jersey	May 22, 1885
5	Nulton, Louis McCoy	Virginia	Sept. 8, 1885
21	O'Fly, Cleland Nelson	Indiana	Sept. 6, 1885
10	Pattin, John Bryson	South Carolina	May 21, 1885
25	Pierce, William Woodward	Maryland	May 19, 1885
8	Pratt, William Vase	Maine	Sept. 9, 1885
13	Prohaska, Julius	Wisconsin	Sept. 7, 1885
2	Rick, George Henry	Michigan	May 20, 1885
18	de Meigier, Louis Rudolph	Ohio	Mar 17, 1885
23	Torburn, Warren Jay	New Jersey	May 19, 1885
4	Twining, Nathan Clark	Wisconsin	Sept. 4, 1885
19	Williams, Philip	Vermont	Sept. 4, 1885
†	Widswart, Henry Lake	New York	May 19, 1885

36 members.

Age at date of admission.		Order of merit in—								Sea-service in practice-ships.		Order of merit.
Years.	Months.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Number of demerits.	Months.	Days.	
16	8	37	34	32	25	34	34	14	55	8	0	34
15	4	35	28	5	14	9	11	31	120	5	7	13
17	4	29	23	24	29	28	34	21	75	5	7	29
16	5	17	21	28	20	19	20	35	140	7	9	27
17	1	26	10	15	18	17	24	30	118	5	7	22
17	7	9	13	12	5	7	7	14	55	5	7	7
17	1	25	16	36	37	36	33	37	180	3	23	†
15	10	20	16	30	36	32	30	28	102	5	7	32
17	2	9	37	33	32	34	34	10	41	7	7	31
15	3	9	25	17	29	19	25	36	176	7	7	28
14	10	32	30	34	32	19	28	12	45	8	0	30
14	9	20	4	1	2	2	1	17	57	8	0	*1
15	9	13	4	2	4	4	4	16	56	3	28	3
17	7	17	8	7	7	3	15	4	16	5	7	6
15	1	28	31	7	32	13	12	27	101	8	0	17
17	1	16	32	37	26	28	32	19	72	3	22	†
17	11	4	1	20	7	10	16	2	13	8	0	9
15	9	15	27	20	20	22	26	6	29	5	7	20
17	8	1	12	16	15	11	12	32	127	5	7	15
17	10	7	6	27	11	12	8	22	77	5	7	14
16	11	5	14	24	12	25	14	9	37	8	0	16
17	10	30	18	22	20	33	28	25	86	5	7	26
16	0	2	19	9	13	18	23	1	9	5	7	11
16	0	19	36	17	28	26	26	13	48	5	7	24
17	7	6	29	19	16	14	9	5	20	8	0	12
16	1	3	19	10	10	6	2	8	35	5	7	5
16	3	20	22	28	16	22	17	20	73	5	7	21
17	11	20	33	13	24	14	4	18	61	8	0	10
15	6	12	26	26	32	22	19	26	93	8	0	25
16	6	14	9	10	6	8	10	23	79	5	7	8
16	10	33	35	31	29	30	31	24	85	5	7	33
16	6	8	3	4	1	1	3	2	13	8	0	2
18	0	26	23	14	19	31	18	11	42	8	0	18
16	1	33	7	23	9	16	22	29	109	8	0	23
16	8	24	1	3	3	5	6	7	33	5	7	4
15	7	30	15	6	27	27	20	33	130	5	7	19
17	1	36	11	34	20	37	37	34	131	7	20	†

Order of annual merit.	Name.	State.	Date of admission.
17	Bailey, Claude.....	Arkansas.....	Sept. 8, 1886.
39	Ballechmidt, Frederick William.....	Wisconsin.....	Sept. 4, 1886.
11	Blankenship, John Millington.....	Virginia.....	May 20, 1886.
29	Bond, Charles Otis.....	Iowa.....	Sept. 8, 1886.
26	Boothwick, Lucius Allyn.....	Massachusetts.....	Sept. 7, 1886.
9	Buck, William Henry.....	Mississippi.....	May 21, 1886.
22	Catlin, Albertus Wright.....	Minnesota.....	May 21, 1886.
8	Chase, John Valentine.....	Louisiana.....	Sept. 28, 1886.
43	Coleman, Noah Tunnell.....	New York.....	May 21, 1886.
6	Davis, Cleland.....	Kentucky.....	May 22, 1886.
27	Dayton, John Havens.....	At large.....	Sept. 13, 1886.
38	Dinges, John William.....	Pennsylvania.....	Sept. 7, 1886.
34	Dismukes, Doctor Eugene.....	Mississippi.....	May 21, 1886.
	Eaton, Frederick Lloyd.....	Michigan.....	Sept. 6, 1886.
31	Ellis, John Rufus.....	At large.....	May 19, 1886.
18	Everhart, Lay Hampton.....	Alabama.....	May 20, 1886.
12	Gartley, Alonzo.....	Iowa.....	May 23, 1886.
7	Gibbs, George Fort.....	District of Columbia.....	May 19, 1886.
5	Holland, Frank.....	Michigan.....	May 22, 1886.
16	Holmes, Urban Tigner.....	Arkansas.....	Sept. 13, 1886.
	Korbersperger, Frank Henry.....	Pennsylvania.....	May 20, 1886.
24	Latimer, Julius Lane.....	West Virginia.....	Sept. 30, 1886.
37	McDonald, Erwin Huntington.....	New York.....	Sept. 7, 1886.
14	McVay, Charles Butler.....	Colorado.....	May 19, 1886.
20	Moffett, William Adger.....	South Carolina.....	Sept. 6, 1886.
21	Morse, Lawrence Henry.....	New York.....	Sept. 23, 1886.
32	Neville, Wendell Cushing.....	Virginia.....	Sept. 13, 1886.
94	Norton, Walter Smith.....	New York.....	Sept. 7, 1886.
23	Price, Claude Bernard.....	Mississippi.....	June 2, 1886.
28	Radford, Cyrus Lugg.....	Kentucky.....	May 25, 1886.
24	Rising, Franklin Sidney.....	Nevada.....	May 20, 1886.
4	Ritter, Henry Snyder.....	Pennsylvania.....	May 25, 1886.
41	Ruhm, Thomas Francis.....	Tennessee.....	May 20, 1886.
25	Ryan, Eugene Dewey.....	New York.....	Sept. 4, 1886.
4	Ryan, John Paul Joseph.....	New York.....	Sept. 6, 1886.
25	Sanders, William Turner.....	At large.....	May 21, 1886.
7	Scheld, Frank Herman.....	New York.....	May 21, 1886.
6	Singer, Matt Howland.....	Nebraska.....	May 21, 1886.
15	Snodgrass, William Alexander.....	Massachusetts.....	Sept. 4, 1886.
4	Spale, John Herman.....	Illinois.....	Sept. 4, 1886.
42	Spear, Lawrence.....	Ohio.....	May 19, 1886.
20	Sullivan, Franklin Buchanan.....	At large.....	May 22, 1886.
19	Taylor, Montgomery Meigs.....	At large.....	May 21, 1886.
23	Treadwell, Thomas Conrad.....	Massachusetts.....	May 21, 1886.
12	Vergilgumag, Charles Theodore.....	California.....	Sept. 6, 1886.
1	Ward, George Creighton.....	New York.....	May 21, 1886.
10	Williams, George Washington.....	South Carolina.....	Sept. 28, 1886.
44	Wiegand, Henry Joseph.....	Ohio.....	May 21, 1886.

[illegible]

Order of merit.	Name.	State.	Date of admission.
24	Allen, David Van Horn	Tennessee	Sept 6, 1887
41	Althouse, Adelbert	Illinois	May 21, 1887
22	Anthon, Archibald	New York	June 9, 1887
37	Beck, William Walker	Maryland	Sept. 6, 1887
• 4	Belknap, Reginald Rowan	Arkansas	Sept. 5, 1887
51	Bierer, Blon Barnett	Kansas	Sept. 24, 1887
19	Blamer, De Witt	Iowa	May 19, 1887
31	Blount, Irving	Indiana	Sept. 6, 1887
36	Brotherton, William Daniel	Wisconsin	Sept. 6, 1887
30	Caldwell, Harry Handly	Illinois	Sept. 7, 1887
56	Camden, Bernard Holt	West Virginia	Aug. 27, 1887
28	Carter, James Francis	Pennsylvania	Mar. 24, 1887
18	Christy, Harley Hannibal	Ohio	May 24, 1887
45	Connall, Charles Follett	Michigan	May 21, 1887
402	Embrey, Wiley Nims	Tennessee	Sept. 6, 1887
26	Emrich, Charles Rulf	Illinois	May 19, 1887
41	Evans, Wabbe	Kansas	Sept. 7, 1887
42	Flowers, Robert Lee	North Carolina	Sept. 7, 1887
32	Ford, William Howland	Iowa	Sept. 7, 1887
1	Gilchrist, Clarence Dyer	Indiana	Sept. 12, 1887
• 3	Gillmer, Norrie Gonzalo	Wisconsin	Sept. 5, 1887
50	Gross, Louis Herman	Illinois	May 19, 1887
27	Hartung, Renwick John	Iowa	Sept. 6, 1887
11	Hough, Henry Hughes	Massachusetts	Sept. 6, 1887
48	Irwin, Noble Edward	Ohio	Sept. 29, 1887
58	Jenkins, Thomas Leslie	North Carolina	May 21, 1887
•	Jewell, Charles Theodore	At large	May 19, 1887
49	Kellogg, Thomas Steele	At large	May 21, 1887
12	Kuenzli, Henry Charles	Wisconsin	Sept. 6, 1887
1	Lancaster, William Lyrurgus	Alabama	May 27, 1887
44	Lane, Rufus Herman	Ohio	June 2, 1887
29	Lane, George William	Iowa	May 21, 1887
46	Lough, Richard Henry	Mississippi	Sept. 6, 1887
458	Leonard, Will Walker	Texas	Sept 30, 1886
55	Lyle, Charles William	Virginia	Sept. 8, 1887
47	Macfarland, Horace Farley	New York	Sept. 6, 1887
25	Macht, Louis John	Pennsylvania	June 17, 1887
23	McGrann, William Hugh	Tennessee	May 21, 1887
40	McKelvy, William Nepler	Pennsylvania	May 21, 1887
• 6	McLomere, Albert Sidney	Tennessee	May 21, 1887
54	Martin, Timothy Francis	Louisiana	May 21, 1887
16	Miles, John Gray Foster	California	Sept. 6, 1887
53	Morris, John Tuzee	Georgia	Sept. 27, 1887
9	Noble, Daniel Benjamin	Indiana	May 21, 1887
22	Nye, Kaga Kato	Empire of Japan	May 21, 1887
4	Palmer, Peter Stevenson	Nebraska	Sept. 7, 1887
15	Park, Edwin Taylor	Ohio	May 21, 1887
17	Peet, Charles Francis	Maryland	Sept. 6, 1887

71 members.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ships.		Order of merit.
Years.	Months.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.		Months.	Days.	
17	3	25	21	27	20	48	2	20	24
18	0	42	44	39	44	82	5	5	41
16	10	28	43	4	36	70	5	--	22
17	7	45	33	39	37	72	2	6	37
16	3	2	8	3	1	2	2	20	4*
17	6	54	42	60	27	56	1	2	51
15	4	25	7	29	62	117	5	16	19
17	6	28	29	41	32	58	2	20	31
15	11	34	38	36	22	50	2	20	36
14	7	14	58	29	30	57	2	20	30
18	0	58	39	61	59	108	1	2	56
18	0	28	27	33	19	47	5	5	28
16	8	16	9	25	37	72	5	5	18
16	8	43	47	34	60	109	3	21	45
17	6	63	60	52	70	152	1	2	662
16	8	16	24	24	60	133	4	21	26
17	10	52	31	49	11	24	2	20	42
16	10	50	47	29	34	66	2	10	43
15	7	45	40	20	6	19	2	20	32
17	6	48	70	68	7	20	--	--	2
17	8	5	2	15	15	43	2	20	3*
16	2	57	59	48	71	166	4	21	59
17	0	32	15	43	16	41	2	20	27
16	8	22	25	2	4	18	2	20	11
18	0	61	22	57	27	58	2	6	48
17	10	52	53	54	65	128	2	15	56
15	3	a	a	a	64	123	2	15	a
15	9	39	60	42	58	107	5	5	49
16	4	4	22	8	33	60	2	20	12
17	2	58	67	67	45	84	2	15	2
16	7	38	35	54	42	80	5	5	44
17	3	21	34	35	39	75	5	5	29
17	1	56	27	51	16	44	1	2	46
16	9	64	57	46	63	118	2	15	658
17	1	44	55	65	46	85	1	6	55
14	8	35	51	36	69	148	2	6	47
16	4	35	55	27	39	75	5	5	38
17	7	13	31	22	35	67	2	20	23
17	11	28	45	45	18	46	5	5	40
18	0	12	11	1	47	88	2	15	6*
16	9	48	60	61	50	92	1	2	54
16	8	16	19	14	9	22	2	15	16
16	8	50	54	54	49	90	2	20	53
16	10	11	13	12	56	98	5	5	9
17	8	70	12	69	30	57	5	5	52
16	10	55	67	23	27	56	2	6	†
16	7	16	16	16	23	51	2	6	15
16	4	33	9	9	20	48	2	17	13

Third Class—

Order of merit			
	Name.	State.	Date of admission.
25	Reed, Milton Eugene.....	Iowa.....	Sept. 8, 1887
26	Ruse, William James.....	Texas.....	Sept. 8, 1887
†	Richards, George.....	Ohio.....	Sept. 12, 1887
‡	Ridgely, Randolph.....	Georgia.....	Sept. 6, 1887
†	Robinson, Roby.....	Alabama.....	May 21, 1887
• 1	Robison, John Keeler.....	Michigan.....	May 20, 1887
21	Rowen, John Howard.....	Pennsylvania.....	Sept. 27, 1887
24	Russell, Edward Gaston.....	Georgia.....	Sept. 7, 1887
25	Senn, Thomas Jones.....	South Carolina.....	May 19, 1887
17	Shepard, George Hugh.....	Wisconsin.....	Sept. 27, 1887
40	Smith, Harry Eaton.....	Ohio.....	May 20, 1887
• 7	Smith, Henry Gerrish.....	Ohio.....	Sept. 8, 1887
10	Smith, Lucien Greathouse.....	Illinois.....	June 3, 1887
20	Sparkman, Sullivan Thomas.....	South Carolina.....	Sept. 24, 1887
•	Stearns, Clark Daniel.....	Michigan.....	Sept. 8, 1887
39	Sypher, Jay Hale.....	Arizona.....	Sept. 8, 1887
60	Theall, Elisha.....	New York.....	May 20, 1887
†	Trickle, Edward.....	Illinois.....	May 20, 1887
• 5	Watt, Richard Morgan.....	Pennsylvania.....	Sept. 22, 1887
†	Wells, Chester.....	Pennsylvania.....	Sept. 10, 1887
14	Willard, Arthur Lee.....	Missouri.....	Sept. 7, 1887
33	Williams, Dion.....	Ohio.....	July 16, 1887
• 2	Zahn, Frank Baker.....	Pennsylvania.....	Sept. 8, 1887

• Resigned.

71 members—Continued.

Age at date of admission.		Order of merit.				Sea-service in practice-ships.			
Years.	Months.	English and history.	Algebra and Geometry.	French and Spanish.	Conduct.	Number of demerits.	Months.	Days.	Order of merit.
17	10	20	39	21	4	18	2	20	25
17	6	61	60	59	57	103	2	20	61
15	7	69	49	63	52	96	1	2	†
16	10	65	69	70	61	110	--	--	‡
16	0	65	65	63	68	139	5	5	†
16	6	3	1	5	48	89	5	5	1*
16	8	45	4	47	24	52	2	20	21
17	9	40	30	25	67	134	2	20	34
15	5	40	26	38	61	95	5	5	35
15	9	6	17	19	53	97	1	2	17
17	5	60	36	52	26	54	5	5	50
17	5	22	6	12	7	20	2	20	7*
17	6	7	20	7	13	37	5	5	10
17	9	9	46	11	12	34	2	20	20
17	8	15	14	9	2	8	2	20	8
16	6	55	37	43	42	80	2	20	39
14	5	68	61	58	53	97	5	5	60
17	7	65	66	50	24	52	5	5	†
15	3	10	3	16	3	11	2	20	5*
16	11	27	64	65	41	77	2	20	†
17	7	7	18	18	9	22	1	2	14
17	5	22	41	29	53	97	2	10	33
16	3	1	5	6	14	41	2	20	2*

FOURTH CLASS.

Fourth class—89 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships		
			Years.	Months.	Months.	Days.	
Allen, Charles	Ohio	Mar. 15, 1888	17	11	2	29	
Arlson, Edgar Emmett	Pennsylvania	May 18, 1888	15	2	2	10	
Baird, Lewis Conway	Indiana	Sept. 6, 1888	17	2			
Ball, Walter	New York	Sept. 6, 1888	16	1			
Bannon, Philip Michael	Maryland	May 21, 1888	16	2	2	20	
Beuret, John Douglass	Ohio	Sept. 7, 1888	17	7			
Bewley, Walter Portrum	Tennessee	Sept. 10, 1888	17	5			
Blakely, John Russell Young	Pennsylvania	Sept. 20, 1888	16	2			
Boltwood, Lucius	Kansas	April 4, 1888	17	11	2	20	
Borden, Thomas Sheppard	Louisiana	Sept. 26, 1888	16	6			
Breckinridge, Joseph Cabell	Kentucky	Sept. 5, 1888	16	6			
Campbell, Joseph Randolph .....	.....	Sept. 20, 1888	16	6		
Chadbourne, Ralph Collins	Maine	May 21, 1888	17	2	2	20	
Childs, Albert Perrin	Pennsylvania	Sept. 6, 1888	17	4			
Churchill, Frederick Augustus	Missouri	Sept. 7, 1888	17	10			
Coleman, James Samuel	Alabama	Sept. 6, 1888	16	3			
Crook, Robert Kyle	Texas	Sept. 6, 1888	15	8			
Curllett, John	Virginia	May 15, 1888	18	0	2	20	
Davis, Austin Rockwell	Georgia	May 21, 1888	16	9	2	20	
Dawson, Gregory Caldwell	Missouri	May 22, 1888	17	0	2	20	
Dawson, William Charles	Missouri	Sept. 6, 1888	17	5			
Day, George Calvin	Vermont	May 19, 1888	16	6	2	20	
Dannett, Stanley Pullen	Maine	May 19, 1888	15	11	2	20	
Douglas, Richard Spencer	Georgia	May 19, 1888	16	9	2	20	
Evans, Holden A	Florida	Sept. 5, 1888	16	9			
Ferguson, Homer Lemont	North Carolina	May 21, 1888	15	2	2	20	
Gamble, Aaron Lichtenberger	Indiana	Sept. 5, 1888	15	10			
Garth, James Jefferson	Missouri	May 19, 1888	17	3	2	20	
Gibbs, Washington Dorsey	Mississippi	May 18, 1888	16	3	2	20	
Goodwin, Leonard	Pennsylvania	May 18, 1888	16	11	2	20	
Hasteluck, Raymond De Lancy	Idaho Territory	Sept. 25, 1888	17	2			
Hines, John Fore	Kentucky	May 21, 1888	17	7	2	20	
Hobbs, William Edward	Missouri,	Sept. 6, 1888	17	1			
Hucker, James Clifton	Tennessee	June 18, 1888	16	10	2	10	
Huffington, Howard Williams	Pennsylvania	May 19, 1888	15	9	2	20	
Hussey, Charles Lincoln	New Hampshire	May 21, 1888	17	3	2	20	
Jennings, Joseph	Virginia	Sept. 7, 1888	16	7			
Jewell, Charles Theodore	At large	May 19, 1887	15	2	2	15	
Jones, Beriah Edmund	Penn., At large	May 19, 1888	17	4			
Kaufman, Charles Louis	New York	May 18, 1888	16	2	2	20	
Kelly, Edward Stanley	New York	Sept. 5, 1888	17	11			
Killmaster, Joseph Cambridge	Ohio	May 21, 1888	16	10	2	20	
Lang, John Young	Pennsylvania	June 1, 1888	17	2	2	20	
Larkin, Roger Huntington	Virginia	May 21, 1888	16	9	2	20	
Logan, William Vance	Indiana	Sept. 6, 1888	16	7			
Low, Theodore Henry	Connecticut	May 18, 1888	17	8	2	20	
Macdonald, Charles Deane	New York	Sept. 25, 1888	17	5			
Mannion, George	North Carolina	May 21, 1888	17	6	2	20	
Manton, Walter James	Louisiana	Sept. 21, 1888	15	9			
Mather, George Herbert	New Jersey	May 22, 1888	15	1	2	20	
Maxwell, Benjamin Howard	New York	May 19, 1888	15	1	2	20	
McDonnell, Joseph Patrick	Illinois	Sept. 7, 1888	16	6			
McNair, John	Kansas	Sept. 6, 1888	17	5			
McKee, Herbert Ellsworth	Washington Territory	May 18, 1888	16	7		20	
McNair, John	Georgia	Sept. 6, 1888	16	10			
Murray, William Lewis	New York	May 21, 1888	17	0	2	20	
.....	Missouri	Sept. 6, 1888	17	4			

Fourth Class—89 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.		
			Years.	Months.	Months.	Days.	
Olmsted, Perry Napier	Oregon	May 21, 1888	16	10	2	20	
Payne, Fred Bonnsville.....	New York	May 21, 1888	16	9	2	20	
Pollard, jr., Charles Teed.....	Texas.....	Sept. 25, 1888	16	0			
Pollock, Emmett Riddle.....	Illinois.....	May 18, 1888	15	5	2	20	
Porter, John Singleton.....	Tennessee.....	Sept. 25, 1888	15	8			
Powell, William Glasgow	New Jersey.....	May 18, 1888	16	8	2	20	
Pringle, Joel Roberts Polnsett.....	Illinois.....	Sept. 6, 1888	15	7			
Randolph, William Browne.....	New York.....	Sept. 6, 1888	17	0			
Rice, Arthur	Indiana	Sept. 7, 1888	17	3			
Ridgely, Randolph.....	Georgia.....	Sept. 6, 1888	16	11			
Rodney, Warren.....	Texas.....	Sept. 6, 1888	17	1			
Russell, jr., John Henry.....	At large.....	May 18, 1888	16	6	2	20	
Sawyer, Frederick Lewis.....	Illinois.....	Sept. 6, 1888	17	4			
Sawyer, Josiah Grigg	Illinois.....	May 19, 1888	16	11	2	20	
Sayers, Robert *	Virginia.....	May 19, 1888	17	10	2	20	
Scott, Guy Terrel	West Virginia.....	Sept. 5, 1888	14	6			
Shaw, Graham	Pennsylvania.....	Sept. 6, 1888	14	7			
Sheehan, James.....	New York	May 21, 1888	15	8	2	20	
Sparks, William Wiley.....	Kentucky	May 22, 1888	16	5	2	20	
Sterling, jr., Yates.....	Massachusetts.....	Sept. 6, 1888	16	4			
stitt, Thomas Lutz.....	Indiana.....	Sept. 5, 1888	15	1			
Stopford, Frederick William.....	Massachusetts	May 19, 1888	15	7	2	20	
Swigart, Raymond Belt	Iowa.....	Sept. 5, 1888	17	11			
Symington, Powers	West Virginia.....	Sept. 7, 1888	15	11			
Thompson, John Haynes.....	California	Sept. 27, 1888	14	10			
Thompson, Leon Seymour.....	Ohio	May 21, 1888	14	0	2	20	
Trant, Frederick Augustus.....	Connecticut	May 19, 1888	16	11	2	20	
Vail, Thomas Holdup Stevens.....	New Mexico.....	Sept. 25, 1888	17	9			
Valentine, William Stanley.....	New York	Sept. 6, 1888	16	2			
Wager, George Peter.....	Texas	Sept. 6, 1888	17	0			
Waldron, Hugh	New York	Sept. 29, 1888	17	2			
Wedekind, George	New York	Sept. 5, 1888	16	6			
Zillman, Christian Charles Herman.....	Missouri	Sept. 27, 1888	17	8			

* Resigned.

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

November 1, 1888.

First class	55 members
Second class	43 members.
Third class	65 members.
Fourth class	89 members.
Total	252

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

October 25, 1887, to October 25, 1888.

APPOINTED ENSIGNS, U. S. NAVY.

Naval Cadet George Breed, class of 1886.
Naval Cadet William Hannum Grubb Bullard, class of 1886.
Naval Cadet Webster Appleton Edgar, class of 1886.
Naval Cadet Joseph Wallace Oman, class of 1886.
Naval Cadet Philip Andrews, class of 1886.
Naval Cadet William Harry Foust, class of 1886.
Naval Cadet Harold Kemble Hines, class of 1886.
Naval Cadet Willard Louis Dodd, class of 1886.
Naval Cadet Harry Edgerton Rumsey, class of 1886.
Naval Cadet Ryland Dillard Tisdale, class of 1886.
Naval Cadet Samuel Melchoir Strite, class of 1886.
Naval Cadet Friend William Jenkins, class of 1886.
Naval Cadet George Franklin Cooper, class of 1886.

HONORABLY DISCHARGED.

Naval Cadet William Howell Caldwell, class of 1886.....	June 30, 1888
Naval Cadet Edwin Van Dusen Johnson, class of 1886.....	June 30, 1888
Naval Cadet Edward Taylor Witherspoon, class of 1886.....	June 30, 1888
Naval Cadet Francis Adelbert Levin, class of 1886.....	June 30, 1888
Naval Cadet John Taylor McMillan, class of 1886.....	June 30, 1888
Naval Cadet Cornelius Canfield Billings, class of 1886.....	June 30, 1888
Naval Cadet John Given Berry, class of 1886.....	June 30, 1888
Naval Cadet Samuel Black Wierum, class of 1886.....	June 30, 1888
Naval Cadet David May Young, class of 1886.....	June 30, 1888

AWAITING ACTION OF THE NAVY DEPARTMENT.

Naval Cadet Frederick Norton Kress, class of 1886.
Naval Cadet George Frederick Hawk, class of 1886.

RESIGNED.

Naval Cadet Alexander Thompson, class of 1885.....	March 1, 1888
Naval Cadet John Noble Griswold, class of 1886.....	May 19, 1888
Naval Cadet Charles Allen, fourth class.....	Feb. 9, 1888

Naval Cadet Edgar Emmett Arison, fourth class.....	Feb. 7, 1888
Naval Cadet William Peter Baya, first class	Feb. 17, 1888
Naval Cadet Joseph Cabell Breckinridge, fourth class.....	Jan. 24, 1888
Naval Cadet Allen Merriam Cook, fourth class.....	Feb. 1, 1888
Naval Cadet Charles Stanhope Cotton, fourth class	Feb. 3, 1888
Naval Cadet John Curlett, fourth class.....	Feb. 1, 1888
Naval Cadet Austin Rockwell Davis, fourth class	Feb. 6, 1888
Naval Cadet Wiley Sims Embrey, third class.....	Oct. 9, 1888
Naval Cadet Edward Gaines, second class	Jan. 19, 1888
Naval Cadet George Fort Gibbs, third class.....	Oct. 17, 1888
Naval Cadet Clarence Dyer Gilchrist, fourth class.....	June 29, 1888
Naval Cadet Leonard Goodwin, fourth class	Feb. 9, 1888
Naval Cadet Frank Holland, third class	June 29, 1888
Naval Cadet Adrian Lorenzo Home, third class.....	Feb. 1, 1888
Naval Cadet Beriah Ellwood Jones, fourth class.....	Feb. 6, 1888
Naval Cadet Joseph Coolidge Kilbourne, fourth class	Feb. 6, 1888
Naval Cadet William Lycurgus Lancaster, fourth class.....	June 13, 1888
Naval Cadet Rozier Bonaparte Larkin, fourth class	Feb. 6, 1888
Naval Cadet Joseph Allen Leeds, fourth class.....	Feb. 4, 1888
Naval Cadet Will Walker Leonard, third class.....	June 29, 1888
Naval Cadet Frederick Nelson Lewis, second class.....	Feb. 3, 1888
Naval Cadet Robeson Lea Low, fourth class	Feb. 6, 1888
Naval Cadet Robert McKeage, fourth class.....	Feb. 6, 1888
Naval Cadet Herbert Ellsworth McReavy, fourth class	Feb. 1, 1888
Naval Cadet John Carey Malone, fourth class.....	Nov. 16, 1887
Naval Cadet George Henry Meudell, jr., second class.....	Jan. 24, 1888
Naval Cadet Clarence Sidney Merrill, fourth class.....	Nov. 28, 1887
Naval Cadet Charles Kemp Murphey, fourth class.....	Feb. 9, 1888
Naval Cadet Walter Smith Norton, third class	Oct. 13, 1888
Naval Cadet George William Nott, fourth class	Feb. 1, 1888
Naval Cadet Frank Theophilus Okell, third class	Feb. 1, 1888
Naval Cadet Letcher Owsley, fourth class.....	Jan. 24, 1888
Naval Cadet William Yulee Perry, third class.....	Dec. 28, 1887
Naval Cadet Edwin Rufus Quimby, second class	Feb. 15, 1888
Naval Cadet Henry Warren Raunos, third class.....	Nov. 18, 1887
Naval Cadet Randolph Ridgely, fourth class	June 6, 1888
Naval Cadet Maurice Sass, fourth class	Feb. 9, 1888
Naval Cadet Robert Sayers, fourth class	Oct. 17, 1888
Naval Cadet William Henry Seymour, second class.....	Jan. 28, 1888
Naval Cadet John Lutmar Soule, third class	June 13, 1888
Naval Cadet Van Dyke Todd, fourth class	Feb. 6, 1888
Naval Cadet Cully Fleming Thomas, second class	April 4, 1888
Naval Cadet George Creighton Ward, third class.....	June 13, 1888
Naval Cadet William Lewis Waller, fourth class	Feb. 6, 1888
Naval Cadet George Wedekind, fourth class.....	Feb. 6, 1888
Naval Cadet Van Wyck Weaver, fourth class	Nov. 25, 1887
Naval Cadet John Clinton Williams, fourth class	Feb. 1, 1888

DISMISSED.

Naval Cadet Charles Voorhees Butler, third class	Feb. 7, 1888
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DIED.

Naval Cadet John William Dinges, second class.....	Sept. 19, 1888
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MERIT-ROLLS FOR 1887-'88.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 63, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for conduct, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls."—(Regulations U. S. Naval Academy, § 150.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum, read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

Merit-roll of the graduating class of naval cadets at the conclusion of the six-years' course, June, 1888.

Order of merit.	NAME.	Final aggregate.							Assignment.
		Seamanship and naval tactics.	Ordnance and gunnery.	Steam engineering.	Navigation.	Modern languages.	(Three reports.)	Aggregate for examination.	
	Maxima	56	44	44	44	28	24	240	
P* 1	KRESS, FREDERICK NORTON	44.80	37.07	29.92	35.75	26.60	20.46	194.60	860.56
2	Breed, George	44.52	40.04	35.31	37.95	24.50	19.86	202.18	833.29
3	Bullard, William Hannum Grubb	41.30	38.06	27.72	30.58	19.18	17.34	174.18	794.86
4	Edgar, Webster Appleton	43.12	40.48	24.09	30.69	30.95	19.26	188.59	791.83
5	Oman, Joseph Wallace	44.24	37.40	32.56	30.80	20.65	20.64	186.29	787.79
6	Andrews, Phillip	45.22	39.49	28.27	33.88	21.14	21.00	189.60	774.94
7	Foust, William Harry	42.00	38.94	28.60	31.13	23.03	17.88	181.58	772.80
P 8	Caldwell, William Howell	39.76	36.52	33.00	33.11	22.33	22.20	186.92	769.46
9	Hinea, Harold Kemble	44.94	34.65	29.26	37.40	27.86	19.56	193.67	760.45
10	Dodd, Willard Louis	40.04	34.87	20.24	28.60	19.95	21.36	165.07	759.59
11	Rumsey, Harry Edgerton	46.76	37.62	29.81	37.84	23.45	19.02	194.50	758.25
12	Tisdale, Ryland Dillard	35.70	40.15	21.89	30.69	21.21	21.18	170.82	752.97
13	Strite, Samuel Melchoir	36.82	38.72	24.53	29.48	19.11	20.40	169.06	748.27
14	Jenkins, Friend William	30.80	37.40	32.23	33.77	22.96	16.14	173.30	748.08
15	Cooper, George Franklin	42.14	34.65	21.45	27.50	25.60	20.70	172.13	736.81
16	Hawk, George Frederick	38.78	34.21	30.69	33.99	21.84	22.62	182.13	736.21
17	Johnson, Edwin Van Deusen	44.94	35.75	23.21	28.49	18.34	20.58	171.31	728.02
18	Witherspoon, Edward Taylor	35.28	36.63	20.90	28.82	21.70	20.76	164.09	727.36
19	Levia, Francis Adelbert	35.00	31.35	24.09	27.69	18.76	20.46	157.27	724.34
20	McMillan, John Taylor	42.00	33.00	25.08	33.01	21.56	20.70	174.35	714.86
P 21	Billings, Cornelius Canfield	37.62	34.21	22.66	27.94	18.48	21.48	162.29	689.30
22	Berry, John Giveen	42.00	28.93	25.74	27.61	20.44	19.62	164.34	687.19
23	Winram, Samuel Black	37.24	33.11	23.10	26.73	18.90	19.68	158.76	684.34
24	Young, David May	36.68	32.01	20.13	26.18	22.54	19.62	157.16	672.84

MERIT-ROLL.—FIRST CLASS.

Merit-roll of the naval cadets of the first class.—Annual examination, June, 1888.

Order of merit.	Name.	Astronomy, history, sailing, gunnery, and other subjects.										Physical and engineering.										Aggregate for				General aggregate for four years.	
		76	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100		101
1	William S. Vanant	60.10	61.15	62.10	63.15	64.10	65.15	66.10	67.15	68.10	69.15	70.10	71.15	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	696.98
2	Frank Marble	61.10	62.15	63.10	64.15	65.10	66.15	67.10	68.15	69.10	70.15	71.10	72.15	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	670.27
3	Curtis P. Wilbur	62.10	63.15	64.10	65.15	66.10	67.15	68.10	69.15	70.10	71.15	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	658.98
4	Abby H. Robertson	63.10	64.15	65.10	66.15	67.10	68.15	69.10	70.15	71.10	72.15	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	652.92
5	Charles H. Brittain	64.10	65.15	66.10	67.15	68.10	69.15	70.10	71.15	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	649.38
6	Charles H. Morgan	65.10	66.15	67.10	68.15	69.10	70.15	71.10	72.15	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	648.89
7	William M. W.	66.10	67.15	68.10	69.15	70.10	71.15	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	642.59
8	Marion L. Miller	67.10	68.15	69.10	70.15	71.10	72.15	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	630.68
9	George N. Hayward	68.10	69.15	70.10	71.15	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	629.89
10	Thomas W. Water	69.10	70.15	71.10	72.15	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	620.10
11	William W. Brown	70.10	71.15	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	616.46
12	John F. Hubbard	71.10	72.15	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	615.33
13	John A. Layton	72.10	73.15	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	613.85
14	Samuel W. B.	73.10	74.15	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	612.04
15	Edward H. Chandler	74.10	75.15	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	97.15	98.10	610.55
16	Arnold Martzath	75.10	76.15	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	98.15	99.10	607.36
17	Charles L. A. Hunter	76.10	77.15	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	97.15	98.10	99.15	100.10	605.09
18	Henry K. Benham	77.10	78.15	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	98.15	99.10	100.15	101.10	603.41
19	Robert F. West	78.10	79.15	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	97.15	98.10	99.15	100.10	101.15	102.10	600.57
20	Charles F. Hughes	79.10	80.15	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	98.15	99.10	100.15	101.10	102.15	103.10	598.94
21	Albert L. Norton	80.10	81.15	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	97.15	98.10	99.15	100.10	101.15	102.10	103.15	104.10	590.87
22	Charles A. Stafford	81.10	82.15	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	98.15	99.10	100.15	101.10	102.15	103.10	104.15	105.10	589.83
23	Samuel J. Aiken	82.10	83.15	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	97.15	98.10	99.15	100.10	101.15	102.10	103.15	104.10	105.15	106.10	585.38
24	John A. Cole	83.10	84.15	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	98.15	99.10	100.15	101.10	102.15	103.10	104.15	105.10	106.15	107.10	580.91
25	John J. Aubertin	84.10	85.15	86.10	87.15	88.10	89.15	90.10	91.15	92.10	93.15	94.10	95.15	96.10	97.15	98.10	99.15	100.10	101.15	102.10	103.15	104.10	105.15	106.10	107.15	108.10	570.34
26	William B. Franklin	85.10	86.15	87.10	88.15	89.10	90.15	91.10	92.15	93.10	94.15	95.10	96.15	97.10	98.15	99.10	100.15	101.10	102.15	103.10	104.15	105.10	106.15	107.10	108.15	109.10	564.03

27	James H. Reld	49.78	13.80	54.72	46.62	14.65	5.52	7.65	16.27	200.01	163.64	105.26	55.33	533.24
28	Stuart W. Cramer	51.49	14.10	54.53	45.90	15.00	5.76	8.13	10.00	210.91	165.62	111.09	55.17	532.79
29	Herman O. Stickney	51.30	13.05	51.30	48.42	14.90	6.44	8.01	18.00	211.42	162.85	112.01	55.72	532.00
30	Edward L. Beach	50.35	14.75	51.49	46.98	14.35	5.92	7.95	14.40	206.19	156.10	105.53	57.21	525.03
31	Frederick B. Bassett, jr	51.11	13.65	50.54	45.18	15.30	5.60	8.25	12.27	201.90	147.67	113.63	56.06	519.28
32	Herbert G. Gates	49.21	13.15	54.15	50.40	15.05	5.76	8.31	8.13	204.16	154.79	102.32	56.37	517.64
33	Moses D. Monroe	51.11	12.95	50.53	47.70	14.15	5.96	7.92	7.47	197.61	143.34	108.24	61.56	510.75
34	Henry A. Wiley	49.21	14.10	49.97	46.98	15.65	5.92	7.83	15.47	205.13	153.07	100.53	51.29	510.02
35	Theodore P. Kane	51.11	14.10	54.72	53.10	16.00	6.04	7.77	7.73	210.57	149.21	97.94	51.39	509.11

* Completed four years' course "with distinction."

b Completed four years' course "with credit."

Merit-roll of naval cadets, second class, 37 members, at the annual examination, June, 1888.

Order of annual merit.	NAME.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Aggregate.
		Maxima.	16	16	56	32	32	72	12	228
1	Richmond P. Hobson.....	12.00	13.84	52.08	23.17	24.04	61.92	8.38	190.23
2	George H. Rock.....	12.96	14.00	47.46	23.73	24.71	58.68	11.22	192.76
3	Arthur B. Hoff.....	12.80	13.84	48.86	21.77	23.59	58.14	8.64	187.64
4	Nathan C. Twining.....	11.96	14.60	47.88	21.91	23.10	57.42	10.02	186.89
5	Louis McC. Nulton.....	14.64	12.52	43.54	20.00	22.12	58.86	9.90	181.71
6	Benjamin F. Hutchison.....	12.12	13.52	44.04	20.65	23.66	52.74	11.04	178.67
7	George W. Danforth.....	12.92	12.96	43.26	21.21	21.63	56.16	8.70	176.84
8	William V. Pratt.....	12.72	13.44	43.54	20.70	21.14	54.54	7.20	173.43
9	Sumner E. Kittelle.....	14.44	14.60	39.20	20.65	20.58	52.38	11.22	173.07
10	John B. Patton.....	12.00	11.40	42.56	18.13	19.74	58.14	8.34	170.31
11	George R. Marvell.....	14.76	12.52	44.80	19.46	19.25	47.88	11.46	170.13
12	Bertram A. Neumann.....	13.72	11.92	39.48	18.76	19.74	54.00	10.80	169.32
13	George B. Bradshaw.....	10.56	12.00	45.64	19.11	20.70	54.18	4.80	168.88
14	Lewis C. Lucas.....	13.36	13.68	36.96	19.60	19.88	55.98	7.38	164.84
15	Edward R. Lowmire.....	14.88	13.00	41.30	18.90	20.37	54.00	4.38	164.81
16	William D. MacDougall.....	13.84	12.88	37.94	19.83	18.90	53.64	9.78	166.51
17	Louis A. Kaiser.....	11.76	11.72	44.04	17.50	19.81	54.00	5.94	165.67
18	Louis R. de Stiguer.....	11.80	12.40	42.28	18.41	18.27	50.40	9.48	163.04
19	Philip Williams.....	11.64	12.68	45.36	17.71	18.76	49.50	4.20	159.85
20	Charles G. Long.....	12.00	12.04	39.20	18.20	19.11	46.80	10.26	158.21
21	Cleland N. Coffey.....	12.00	12.44	46.82	18.76	19.11	50.76	7.02	157.51
22	William C. Cole.....	11.80	13.20	41.86	18.62	19.46	47.34	4.92	157.50
23	Warren J. Terhune.....	10.80	13.60	38.36	20.58	19.60	48.42	5.46	156.82
24	George G. Mitchell.....	12.04	10.80	40.88	17.64	18.83	46.80	9.12	156.11
25	William W. Phelps.....	12.88	12.20	37.38	17.59	19.11	49.86	6.42	155.45
26	Thomas P. Magruder.....	11.64	12.00	38.50	18.20	18.00	46.62	6.84	152.46
27	Robert E. Carey.....	12.12	12.48	36.82	18.20	19.18	49.50	3.60	151.90
28	Ben H. Fuller.....	12.92	12.24	40.88	17.57	19.18	46.98	1.44	151.21
29	Charles A. Brand.....	11.68	12.40	37.94	17.57	18.62	45.00	7.50	150.71
30	William K. Harrison.....	11.20	11.88	35.00	17.50	19.18	46.62	9.30	150.68
31	George L. Fernier.....	12.92	10.36	37.70	17.50	17.92	45.00	9.54	148.94
32	Robert M. M. Dutton.....	12.00	12.64	40.68	17.15	18.13	46.44	5.88	148.92
33	Julius Prochaska.....	10.80	10.84	37.54	17.57	18.48	46.08	6.30	147.21
34	Krnest B. Anderson.....	10.08	11.00	35.84	17.85	17.92	45.00	8.70	146.70
†	George W. Kirk.....	12.24	11.04	35.32	17.78	18.62	45.54	7.68	146.82
†	Henry L. Woodward.....	10.24	13.04	35.00	18.20	17.01	47.74	4.14	141.57
;	Louis L. Briggs.....	11.84	12.04	34.92	16.31	17.64	45.36	1.20	139.01

Merit-roll of naval cadets, third class, 48 members, at the annual examination, June, 1888.

Order of annual merit.	NAME.	Trigonometry analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Aggregate.
	Maxima.....	48	24	24	24	24	8	152
*1	Thomas F. Ruhm.....	46.08	21.48	21.78	21.90	21.06	5.60	137.90
*2	Lawrence Spear.....	44.04	20.10	21.12	20.58	20.76	5.63	132.23
*3	Noah T. Coleman.....	44.76	20.52	21.30	19.50	22.28	2.88	131.22
*4	Henry J. Ziegemeier.....	44.28	18.48	20.94	20.88	19.32	7.07	130.97
5	John V. Chase.....	42.36	19.38	18.78	20.46	21.12	4.13	126.23
6	Cleland Davis.....	40.68	19.50	19.98	20.22	22.14	4.19	126.11
7	Frank H. Schofield.....	37.80	20.28	21.00	19.14	20.88	6.53	123.63
8	Matt. H. Signor.....	44.28	19.86	18.18	19.44	19.56	0.64	121.96
9	William H. Buck.....	37.92	18.36	20.94	18.60	19.80	5.47	121.09
10	George W. Williams.....	42.36	19.38	19.92	18.72	18.78	1.02	120.18
11	John M. Blankenship.....	35.28	16.92	19.38	17.58	22.08	6.85	118.09
12	Alonzo Gartley.....	38.64	17.16	18.96	16.68	23.22	3.14	117.80
13	Charles T. Vogelgesang.....	34.80	17.34	19.74	21.60	16.60	7.14	117.42
14	Charles B. McVay.....	38.52	16.44	18.60	19.38	18.18	6.21	117.38
15	William A. Snow.....	32.28	15.78	20.16	18.66	21.48	6.24	114.60
16	Urban T. Holmes.....	37.68	17.52	18.12	18.66	19.44	3.10	114.52
17	Claude Bailey.....	36.36	16.86	18.00	17.82	18.30	5.50	112.84
18	Lay H. Everhart.....	40.20	16.74	15.78	16.02	22.62	0.96	112.32
19	Montgomery M. Taylor.....	34.08	17.94	19.14	19.74	20.40	0.80	112.10
20	William A. Moffett.....	32.16	16.44	19.08	18.30	20.34	5.50	111.82
21	Lawrence H. Moses.....	39.00	17.04	17.88	21.54	15.06	0.16	110.66
22	Albertus W. Catlin.....	36.24	17.10	17.10	16.98	18.36	3.55	109.38
23	Claude B. Price.....	30.60	18.54	19.08	16.74	18.30	5.80	109.15
*24	Franklin S. Rising.....	34.92	16.80	17.16	19.14	16.98	3.42	108.42
25	Thomas C. Treadwell.....	32.16	18.12	19.08	17.58	16.68	4.29	107.91
26	Lucius A. Bostwick.....	33.24	18.42	19.14	15.00	19.32	2.46	107.58
27	John H. Dayton.....	34.32	17.94	19.38	16.92	15.18	3.52	107.26
28	Cyrus S. Radford.....	33.36	15.42	16.32	15.66	21.54	4.86	107.16
29	Charles O. Bond.....	32.76	15.78	17.70	16.08	19.74	4.96	107.02
30	Franklin B. Sullivan.....	34.44	16.02	18.00	16.68	19.50	0.83	105.47
31	John R. Edie.....	30.48	15.12	15.66	19.50	20.04	4.61	105.41
32	Wendell C. Neville.....	31.32	15.06	16.80	17.52	18.78	4.10	103.67
33	John W. Dinges ¹	32.64	17.34	17.28	15.00	15.60	5.00	103.46
34	Doctor E. Dismukes.....	32.64	16.02	17.16	15.84	18.18	1.95	101.79
35	William T. Saunders.....	32.64	15.06	16.74	15.72	17.46	3.39	101.01
36	Eugene D. Ryan.....	31.68	15.00	17.58	17.04	16.62	2.96	100.90
37	Erwin H. McDonald.....	31.08	15.18	18.54	16.44	15.90	1.92	99.06
38	Julius L. Latimer.....	31.44	16.74	17.64	16.14	15.00	0.99	97.95
†	George F. Gibbs.....	31.32	14.46	17.64	23.10	22.38	1.70	110.60
†	Henry S. Ritter.....	35.88	14.82	19.20	15.78	16.62	7.30	109.60
	Frank H. Kochersperger ²	29.16	15.84	17.52	16.02	23.16	5.31	107.01
	Frederick L. Eaton ²	31.44	14.76	19.44	17.46	16.14	1.38	100.62
‡	Frank Holland.....	29.76	15.66	17.28	14.40	19.74	1.79	98.63
†	John P. J. Ryan.....	30.84	14.52	17.04	15.90	16.80	2.75	97.85
39	Frederick W. Ballachmider.....	30.48	15.18	17.10	14.88	17.58	2.62	97.84
‡	George C. Ward.....	28.68	12.48	15.72	15.66	18.48	0.35	91.37
‡	John L. Soule.....	25.80	14.88	17.10	15.18	15.42	2.46	90.84
α	Walter S. Norton.....	α		17.70	"	"	5.50	

¹ Died September 19, 1888.

² Subject to examination.

Merit-roll of naval cadets, fourth class, 71 members, at the annual examination, June, 1888

Order of merit.	NAME.	English and his- tory.	Algebra and ge- ometry.	French and Span- ish.	Conduct.	Average.
	Maxima.....	24	24	24	4	76
01	John K. Robinson	21.24	24.48	22.08	2.81	71.15
02	Frank B. Kahn	21.60	22.02	22.36	3.45	70.11
03	Horatio G. Gilmer	20.76	24.00	21.18	3.43	69.67
04	Reginald R. Belknap	21.54	20.64	23.04	3.97	69.19
05	Richard M. Watt	20.40	23.16	21.12	3.85	68.53
06	Albert S. McLemore	20.10	20.28	24.48	2.83	67.69
07	Henry G. Smith	18.84	22.50	21.42	3.73	66.49
08	Clark D. Stearns	19.50	19.26	21.84	3.89	64.49
09	Daniel R. Nisde	20.34	19.98	21.42	2.69	64.43
10	Lucien G. Smith	20.58	18.12	22.20	3.51	64.41
11	Henry H. Hough	18.84	17.70	24.00	3.76	64.30
12	Henry C. Knecht	20.94	18.00	22.06	3.29	64.22
13	Charles F. Preston	17.88	20.58	21.84	3.36	63.64
14	Arthur L. Willard	20.58	18.36	20.46	3.71	63.11
15	Edwin T. Pollock	19.32	18.06	21.12	3.32	62.78
16	John G. F. Monte	19.32	18.24	21.36	3.71	62.63
17	George H. Shepard	20.70	18.90	19.98	2.71	62.29
18	Harley H. Christy	19.32	20.58	18.84	3.04	61.78
19	Id Witt Blamer	18.78	22.20	18.30	2.44	61.72
20	Sullivan T. Sparkman	20.52	18.72	21.60	3.55	61.45
21	John H. Rowen	17.04	22.92	17.04	3.31	60.31
22	Archibald Anthon	18.06	16.02	22.92	3.07	60.07
23	William H. McGinnis	20.04	17.04	19.20	3.11	59.45
24	David V. H. Allen	18.78	18.00	18.00	3.36	58.80
25	Milton E. Reed	19.14	16.26	19.50	3.76	58.72
26	Charles R. Emrich	19.72	17.94	19.14	2.23	58.63
27	Kenwick J. Hartung	17.94	19.08	17.34	3.41	57.77
28	James F. Carter	18.06	17.34	18.24	3.37	57.01
29	George W. Lane	18.36	16.74	18.06	3.00	56.76
30	Henry H. Caldwell	19.56	15.12	18.30	3.24	56.22
31	Irving Blunt	18.06	17.22	17.58	3.23	56.09
32	William H. Ford	17.04	15.60	19.08	3.75	56.07
33	Don Williams	18.84	16.14	18.30	2.71	55.99
34	Edward G. Russell	17.40	17.10	18.84	2.21	55.55
35	Thomas J. Smith	17.40	17.36	17.82	2.73	55.41
36	William D. Protherton	17.82	16.32	17.88	3.53	55.35
37	William W. Black	17.04	16.32	17.76	3.04	54.76
38	Leah J. Magill	17.76	15.30	18.60	3.00	54.66
39	Isa H. Smith	17.76	16.36	17.34	2.23	54.50
40	William N. McKelvey	18.06	15.78	17.28	3.20	54.31
41	Adolph Altman	17.34	15.36	17.76	2.91	53.67
42	William Evans	16.50	17.04	16.02	7.68	53.54
43	Robert L. Flowers	16.36	15.96	18.30	3.12	53.54
44	Robert H. Lane	17.64	16.08	16.26	2.93	53.51
45	Charles F. Smith	17.10	15.06	18.12	2.55	53.49
46	Robert H. Leigh	16.14	17.34	16.36	3.41	53.27
47	Harvey M. Macfarland	17.70	15.54	17.88	2.00	53.21
48	Nathan N. Smith	15.60	16.06	16.20	3.25	53.11
49	Thomas K. King	17.46	15.00	17.12	2.57	52.85
50	Harvey D. Smith	15.78	16.02	15.32	3.28	52.80
51	Robert B. Smith	16.36	16.08	15.96	3.25	51.65
52	Robert K. Smith	15.64	20.04	16.34	3.26	51.60
53	John T. Smith	16.56	15.36	16.26	2.80	50.98
54	Frederick D. Smith	16.92	15.00	15.06	2.77	50.75
55	Charles W. Smith	17.10	15.30	15.46	2.82	50.72

Merit-roll of naval cadets, fourth class, etc.—Continued.

Order of merit.	NAME.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.	Aggregate.
	Maxima -----	24	24	24	4	76
56	Bernard H. Camden -----	15.84	16.26	15.90	2.56	50.56
57	Thomas L. Jenkins -----	16.50	15.48	16.26	2.32	50.56
58	Will W. Leonard -----	15.18	15.18	17.22	2.43	50.01
59	Louis H. Gross -----	16.08	15.06	16.86	1.79	49.79
60	Elisha Theall -----	15.00	15.54	16.14	2.71	49.39
61	William J. Reese -----	15.66	15.00	16.02	2.63	49.31
62	Wiley S. Embrey -----	15.36	15.01	16.32	1.97	48.65
†	Peter S. Pillot -----	16.26	14.46	19.20	3.25	53.17
†	Chester Wells -----	18.48	14.88	15.30	2.97	51.63
†	Edward Trickle -----	15.12	14.52	16.56	3.31	49.51
‡	Clarence D. Gilchrist -----	16.92	13.38	14.82	3.73	48.85
†	George Richard -----	14.88	15.60	15.36	2.72	48.56
‡	William L. Lancaster -----	15.84	14.46	14.88	2.88	48.06
†	Roby Robinson -----	15.12	14.82	15.36	2.15	47.45
‡	Randolph Ridgely -----	15.12	13.56	13.86	2.53	45.07
α	Charles T. Jewell -----	α	α	α	2.36	

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *Naval Cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one Naval Cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. The course of Naval Cadets is six years.—(*Rev. Stat.*, § 1520.)

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the Naval Cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. At least ten appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for Naval Cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be between the ages of fourteen and eighteen years, and physically sound, well-formed, and of robust constitution."—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examinations.

No leave of absence will be granted to Cadets of the fourth class.

EXAMINATION.

VIII. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat.*, § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition;

Any disease, deformity, or result of injury that would impair efficiency; such as—

Weak or disordered intellect;

Cutaneous or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia or undescended testis;

Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the Academic Board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write, from dictation, paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or compound, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on Arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square and cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of Arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of Arithmetic; in other words, they must possess such a complete knowledge of Arithmetic as will enable them to proceed at once to the higher branches of Mathematics without further study of Arithmetic.

ALGEBRA.—The examination in *Algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English Grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of Orthography, Etymology, and Syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; *e. g.*,

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words, thus:

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected, thus:

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have*

been there and seen it. 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definition of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast-lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they empty; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and colonial possessions; locality of cities of historical, political, or commercial importance (attention is especially called to the rivers and bodies of water on which cities are situated); the course of a vessel in making a voyage between well known sea-ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, and of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with so much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and fix their position. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were those colonies united? What did the colony of *Pennsylvania* include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as Naval Cadets, and become students of the Academy. Each Cadet will be required to sign articles by which he binds himself to serve in the *United States Navy* eight years (including his time of probation at the Naval Academy), unless sooner discharged. The pay of a Naval Cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz.,

One dress jacket.....	\$19.00	One hand-glass	\$0.45
One blouse.....	12.00	One jack-knife .....	.53
Two pairs trousers	22.00	Six sheets	3.42
Two working suits	2.28	Hammock clews.....	.40
One overcoat.....	22.00	One pair bathing trunks .....	.20
One rubber coat.....	4.75	Three pairs white thread gloves ..	.81
One rubber hat.....	.92	Two black silk neckties .....	.64
Two pairs regulation leggins	1.44	Two clothes bags.....	.50
One parade cap	2.55	One hammock mattress.....	2.85
One knit cap.....	.66	<i>a</i> One requisition book .....	.42
One mug.....	.10	<i>a</i> One pass book .....	.40
One soap box .....	.62	<i>a</i> One stencil, ink, and brush .....	.45
One laundry book.....	.34	<i>a</i> One bottle of indelible ink .....	.18
One pair of blankets.....	3.75	<i>a</i> One wash basin and pitcher.....	.84
Two pairs of high shoes	9.00	<i>a</i> One pair gymnasium slippers...	.85
One pair of overshoes .....	.63	*One whisk brush .....	.15
Eight white shirts	8.00	*One coarse comb .....	.12
Twelve linen collars	1.68	*One cake of soap .....	.10
Eight pairs of cuffs.....	2.00	*One hair brush .....	.50
*Eight pairs of socks	2.00	*Stationery .....	.50
*Eight towels.....	2.00	*Twelve white handkerchiefs.....	2.52
*Shaving outfit	1.30	*One pair suspenders.....	.36
*Four pairs drawers (winter)	5.00	*Four night shirts.....	2.52
<i>b</i> Four pairs drawers (summer)	1.84	*One tooth brush .....	.20
*Four undershirts (winter)	5.00	*Thread and needles.....	.15
<i>b</i> Four undershirts (summer)	2.00	*Blacking brush and blacking....	.39

When moving into Cadet Quarters, Cadets will supply themselves with the following articles, viz.,

<i>a</i> Two bedspreads.....	\$2.84	<i>a</i> One rug	\$1.15
<i>a</i> Two pairs drill gloves	1.00	<i>a</i> One hair mattress.....	5.10
<i>a</i> One slop jar .....	.90	<i>a</i> One straw mattress.....	1.32
<i>a</i> Two spatter-cloths.....	.90	<i>a</i> One broom .....	.75
One hair pillow .....	.75	Six pillow cases.....	1.50
One mirror.....	1.60		

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice-ship, viz.,

Three working suits.....	\$3.42	One pair rubber leggins.....	\$0.85
Four woolen shirts.....	7.52	One pair high shoes	3.75
Three white sailor hats.....	1.20	One knit cap.....	.66

Articles marked *a* will not be taken on board the practice-ship.

Of the articles marked *b* Cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the Cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the store-keeper.

Each Naval Cadet must on admission deposit with the Pay Officer the sum of \$20, for which he will be credited on the books of that officer, to be expended by direction of the Superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing.....	\$171.12
Deposit for books, &c.	20.00
<hr/>	
Total amount required	191.12

The value of clothing brought from home is to be deducted from this amount.'

Each Naval Cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

XIV. A Naval Cadet who voluntarily resigns his appointment within a year of the time of his admission to the Academy will be required to refund the amount paid him for traveling expenses.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Todhunter's Higher Algebra.
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: Sauveur system of teaching languages.	Sauveur Petites Causes. Bellows's Pocket Dictionary.*

COURSE OF INSTRUCTION.

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate co-efficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Todhunter's Higher Algebra. Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry
<i>English Studies, History, and Law</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Rhetoric. Ayres's Orthoepist Ayres's Verbalist
	2	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States by notes or lectures.	Ellis's History of the United States. Mitchell's Atlas.*
<i>Modern Languages</i>	3	4	FRENCH: Sauveur system of teaching languages.	Petite Grammaire Française pour les Anglo-Bellows's Pocket Dictionary.*
			SPANISH: Robertsonian system. [Given as an advanced course.]	Robertson's Spanish Course. Tauchnitz Pocket Dictionary.*
			GERMAN: Dreyer's method of teaching languages.	Dreyer's Cumulative Method and Verbal Drill. Tauchnitz Pocket Dictionary.*

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
Mathematics.	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry; Todhunter's Trigonometry. Bowditch's Useful Tables.
English Studies, History, and Law.	3	1	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seely's English Lessons for English People; Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verballist.*
	2	8		
	2	1	HISTORY: Contemporary history, including the comparative study of governments, institutions, and political geography.	The School Herald. Martin's Statesman's Year Book.* Mitchell's Atlas.*
Modern Languages.	2	3	LAW: Constitution of the United States.	Andrews's Manual of the Constitution.
	3		FRENCH: Reading and translating French comedy; conversation and grammar.	Böcher's Series of French Plays. Bercy La Langue Française, 1 ^{re} Partie. Bellows's Dictionary.* Robertson's Spanish Course. Knapp's Spanish Readings. Dreyspring's Cumulative Method and Verb Drill. Ehlerman's Collection of German Plays. Tauchnitz Pocket Dictionary.*
			SPANISH: The Robertsonian system; conversations thereon; reading and translating extracts from modern authors; writing original themes. [Given as an advanced course.] GERMAN: Continuation of fourth-class course; reading German comedy; writing original themes. [Given as an advanced course.]	
Mechanical Drawing.	2	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and planes, the construction of geometrical solids, and the projections and sections of surfaces and solids.	Tomkin's Machine Construction and Drawing.*

Are they Harvard men?

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SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Physics and Chemistry.	5	4	<p>PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science; to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations, and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Danilell's Principles of Physics.</p> <p>Practical Physics, by Stewart and Gee.</p> <p>Remond's General Chemistry.</p> <p>Remond's Organic Chemistry.</p> <p>Lecture Notes.</p>
Mathematics.	1	4	DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single-curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axonometric projections; shades and shadows.	Church's Descriptive Geometry.
	4	4	ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of co-ordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.	C. Smith's Conic Sections; Aldis's Analytical Geometry.
Modern Languages.	2	4	<p>FRENCH: Reading and conversation. Translation from English into French themes.</p> <p>SPANISH: Continuation of first term course (advanced course).</p> <p>GERMAN: Continuation of first term course (advanced course).</p>	<p>Bercy La Langue Française, 2^{me} Part.</p> <p>Bellows's Pocket Dictionary.</p> <p>Same as first term.</p> <p>Same as first term.</p>
Mechanical Drawing.	4	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale, oblique projections; isometrical drawing; drawing screws, bolts, nuts, gearing, and details of guns, machinery, and engines; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Tonkin's Machine Construction and Drawing.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering.</i>	4	4	MARINE ENGINES AND BOILERS: Explanation of all the parts of an engine; types of engines; steam valves and other valves; generation of steam; distribution and expansion of steam; screw propellers and side wheels; the indicator and its diagrams; the power of an engine and computations relating to it; hydrometers; saturation; scale and its prevention; casualties; boilers; materials; combustion; transfer of heat; testing steam-engines; the principles of mechanism.	Sennett's Marine Steam-Engine. Goodeve's Elements of Mechanism.
<i>Mechanics and Applied Mathematics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubiture of volumes; rectification of curves; centres of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's Integral Calculus, and Differential Equations.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations on simple harmonic motion; wave motion, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses, length of light waves. Photography.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrausch's Physical Measurements. Lecture Notes.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, conversation, and themes.	Professional French Reader. Bellows's Pocket Dictionary.*
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Sketching machinery and making working drawings; making tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction and Drawing.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; different units of time and calendars; the moon; tides; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	White's Astronomy, Chauvenet's Spherical and Practical Astronomy; Bowditch's Navigator; American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3½	4	Course for first term continued.	
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations in light and heat, concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the co-efficients of expansion, and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electromotive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as first term, and Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements. Lecture Notes.
<i>English Studies, History, and Law.</i>	1	4	ENGLISH LITERATURE Themes; Lectures.	Shakespeare's Julius Caesar, Rolfe's Edition. School Herald.
<i>Modern Languages.</i>	1	1½	FRENCH Same as first term.	Same as first term

FOURTH YEAR—FIRST CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	4	4	<p>SEAMANSHIP: Fitting and rigging ships for sea; rope, blocks, and tackles; wire rope and metal fittings; purchasing weights; fitting and use of ground tackle; storage; handling vessels at wharves and docking; sails; working ship under sail and under steam; repairs to rigging, spars, rudder, and all fittings in emergencies; turning experiments; fitting and management of boats; duties of officers and crew; organization of crews; drills and evolutions; rules of the road; laws of storms; general instruction upon the management of vessels of various rigs and propellers.</p> <p>NAVAL CONSTRUCTION: Wooden ship building; ship-building in iron and steel, including the various systems of framing; keels, keelsons, stems, and ram bows; sterns, plating, deck-framing, bulkheads, rudders, miscellaneous fittings, and armor-plating; torpedo boats and vessels of special construction; sheathing of ships; launching; docks and docking; displacement and buoyancy of ships, and considerations of water-tight decks, bulkheads, and double bottoms; stability of ships, and the use of diagrams of stability; rolling and pitching of ships; water-chambers and bilge-keels; structural strength and strains of ships; materials for ship-building; tests of steel; resistance of ships; steering of ships; the qualities and performance of ships in general.</p> <p>NAVAL TACTICS: Tactical units and nomenclature; manœuvring groups of ships; fleet manœuvres.</p> <p>SIGNALING: Army and Navy (English Morse) code; Navy code of flag signals; International code.</p>	<p>Luce's Seamanship. Special Notes and Drawings. Navy Department Pamphlets. Reed's Ship Building. White's Manual of Naval Architecture. Navy and International Signal Books. Fleet Drill Book, Navy Department.</p>
Ordnance and Gunnery.	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat-howitzers and machine-guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions. Text-book of Ordnance and Gunnery (Naval Academy publication).</p>

FOURTH YEAR—FIRST CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects	Text-books.
Ordnance and Gunnery.	3	3	<p>INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Upton's Tactics.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Exterior Ballistics (Naval Academy publication).</p> <p>Ordnance Notes.</p>
Astronomy, Navigation, and Surveying.	4	4	<p>THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; the use of instruments, especially those for determining terrestrial latitude and longitude; different units of time; calendars; the moon; tides; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.</p> <p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the constructing and use of navigating instruments, the use of tables, and the solution of problems, determination of meridian distances.</p>	<p>White's Astronomy (Chauvenet's Spherical and Practical Astronomy).</p> <p>Bowditch's Navigation.</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Bowditch's Navigation.</p> <p>"Navigation" arranged as a text-book for the U. S. Naval Academy.</p>
Mechanics and Applied Mathematics.	3	1	METHOD OF LEAST SQUARES. The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas, independent observations, conditioned observations.	Merriman's Method of Least Squares.
	3	3	APPLIED MECHANICS: Elasticity, stress and strain; theory of structures, strength and deflection of beams, beams of uniform resistance.	Cotterill's Applied Mechanics.
Physics and Chemistry.	3	4	<p>PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory, determination of the constants of galvanometers, testing ammeters and voltmeters, running dynamos and electric motors and measuring their efficiency, experiments on the electric transmission of energy, testing cables and electric light wire, experiments upon induction; practice in photography and micro-photography.</p> <p>CHEMISTRY: A short course in chemical analysis.</p>	<p>Same as second class year.</p> <p>Lecture Notes.</p>

FOURTH YEAR—FIRST CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	6	4	Course of the first term continued.	
<i>Ordnance and Gunnery.</i>	5½	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas (of Noble and Abel) connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication).</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Berger's Probability of Hitting an Object.</p>

FOURTH YEAR—FIRST CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of the deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and heeling errors. Navigation.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Howell's Theory of the Deviations of the Compass.</p> <p>Evans's Elementary Manual for the Deviations of the Compass in Iron Ships.</p> <p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Howell's Marine Surveying.</p> <p>Projection Tables.</p> <p>Bowditch's Navigator.</p>
<i>Physiology and Hygiene.</i>	11	4	<p>PHYSIOLOGY AND HYGIENE: General description of the human body and its functions. Hemorrhage, its causes and methods of arrest. Drowning, means of resuscitation therefrom. Common accidents, measures to be adopted therein.</p> <p>Ventilation, necessity for, and means of, in ships and houses.</p> <p>Bathing, exercise, clothing.</p> <p>Food; digestibility of, methods of cooking; what the body requires and does not require.</p> <p>Impure water, alcoholic drinks, tobacco, and other narcotics; their nature and effects in various amounts, on the human system.</p> <p>Habit, its inheritance, formation, and correction. Requisites for a healthy body and a sound mind.</p> <p>Specific contagious diseases.</p> <p>Lectures, notes, and illustrations.</p>	Cutter's Comprehensive Physiology.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics.....							4	5
Ordnance and Gunnery.....							3	5
Astronomy, Navigation, and Surveying.....						2	3	4
Steam Engineering.....					4	3		F
Mechanics and Applied Mathematics.....					5	5	3	4
Physics and Chemistry.....				5 F	4	4	3	
Mathematics.....	6	5	5	5				
English Studies, History, and Law.....	5	5	4	1				
Modern Languages.....	5	5½	3	2	1 F	½ F		
Mechanical Drawing.....			4	2½	2	1		
Physiology and Hygiene.....							1½	

PROGRAMME OF RECITATIONS.

FIRST TERM—1888-'89.

Departments.	Fourth class.	Third class.	Second class.	First class.
Astronomy, Navigation, and Surveying				T. W. Th. F. (1).
English Studies, History, and Law	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)		
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)		
Mechanical Drawing		M. W. Th. F. (3)	T. (3), S. (1)	
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2).
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (7.30 to 9.30 p. m.)	
Ordnance and Gunnery				T. Th. (2), F. (3).
Physics and Chemistry			T. W. Th. F. (2)	M. S. (1).
Seamanship, Naval Construction, and Naval Tactics				M. T. W. Th. (3).
Steam Engineering			M. W. Th. F. (3)	

SECOND TERM.

Astronomy, Navigation, and Surveying			W. F. (3)	M. T. Th. F. (1).
English Studies, History, and Law	M. T. W. Th. F. (3)	M. (1)		
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)		
Mechanical Drawing		T. Th. (3), S. (1)	W. (2)	
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	
Modern Languages	M. T. W. Th. F. (2), S. (1)	W. F. (3)	S. (1), F. (7.30 to 9.30 p. m.)	
Ordnance and Gunnery				M. T. W. Th. F. (2).
Physics and Chemistry		(M. (3), T. W. Th. F. (1), (F. (7.30 to 9.30 p. m.))	M. T. Th. F. (2)	
Physiology and Hygiene				W. (3), S. (1).
Seamanship, Naval Construction, and Naval Tactics				M. T. Th. F. (3), W. (1).
Steam Engineering			M. T. Th. (3)	F. (7.30 to 9.30 p. m.)

TABLE OF CO-EFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class.	Maxima for four years.	Maxima for final graduation.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>						
Seamanship, Ship Building, and Naval Tactics.....				17		56
Cruise Reports, Navigation Note Books, Journals, and Station Bills.....						24
Practice Cruise.....				5	88	
<i>Ordnance and Gunnery.</i>						
Ordnance Instructions, Infantry Tactics, and Gunnery.....				*18	72	44
Ordnance and Gunnery.....						
<i>Astronomy, Navigation, and Surveying.</i>						
Astronomy, Navigation, and Surveying.....			3	13	76	44
Practice Cruise.....				3		
<i>Steam Engineering.</i>						
Steam Machinery, Marine Engines, and Boilers.....			12			
Practical Instruction in Steam.....				2	68	44
Summer Practical Work.....			3			
<i>Mechanics and Applied Mathematics.</i>						
Differential and Integral Calculus, and Mechanics.....			15			
Least Squares and Strength of Materials.....				5	80	
<i>Physics and Chemistry.</i>						
Chemistry and Physics.....		6				
Physics.....			12			
Physics.....				5	92	
<i>Mathematics.</i>						
Algebra and Geometry.....	6					
Trigonometry, Analytical Geometry, and Descriptive Geometry.....		12			72	
<i>English Studies, History, and Law.</i>						
English and History.....	6					
English, History, and Law.....		6			48	
<i>Modern Languages.</i>						
French, Spanish, and German.....	6	6	5			
French, Spanish, and German.....					68	28
<i>Mechanical Drawing.</i>						
Mechanical Drawing.....		6	4		40	
<i>Miscellaneous.</i>						
Physiology and Hygiene.....				3	12	
Conduct.....	1	2	3	5	44	
Maxima for each class.....	76	152	228	304	760	240
Deduction for each demerit.....	0.013	0.032	0.060	0.133		

* In making up the standing for a year, the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy codes; management of steam launches; steam fleet tactics (with steam launches).

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal, with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; and from these observations finding the approximate and the exact co-efficient and the horizontal and vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors (motive and turret).

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Months.	Weeks.	First Division.	Second Division.	Third Division.	Fourth Division.
Oct	1	Company (4). Monitor (1).	Battery (4). Monitor (1).	Target great guns (4). Monitor (1).	Steam tactics (4). Monitor (1).
	2	Battery (4). Monitor (1).	Company (4). Monitor (1).	Steam tactics (4). Monitor (1).	Target great guns (4). Monitor (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns (4). Monitor (1).	Steam tactics (4). Monitor (1).	Company (4). Monitor (1).	Battery (4). Monitor (1).
Nov	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam tactics (4). Monitor (1).	Target great guns (4). Monitor (1).	Battery (4). Monitor (1).	Company (4). Monitor (1).
	3	Battalion infantry (4). Monitor (1).	Battalion infantry (4). Monitor (1).	Battalion infantry (4). Monitor (1).	Battalion infantry (4). Monitor (1).
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec	1	Broadsword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Broadsword.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Broadsword.	Steam.
	4				
Jan	1	Steam.	Practical ordnance.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Smallsword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.

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SEMI-ANNUAL EXAMINATION.

Feb	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
Mar	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Deviat'n compass (4). Seamanship (1).	Deviat'n compass (4). Seamanship (1).	Deviat'n compass (4). Seamanship (1).	Deviat'n compass (4). Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	General quarters.	General quarters.	General quarters.	General quarters.
April	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4). General quarters (1).	Skirmish (4). General quarters (1).	Steam tactics (4). General quarters (1).	Torpedoes (4). General quarters (1).
	3	Skirmish (4). Seamanship (1).	Target great guns (4). Seamanship (1).	Torpedoes (4). Seamanship (1).	Steam tactics (4). Seamanship (1).
	4	Steam tactics (4). Seamanship (1).	Torpedoes (4). Seamanship (1).	Target great guns (4). Seamanship (1).	Skirmish (4). Seamanship (1).
May	1	Torpedoes (4). General quarters (1).	Steam tactics (4). General quarters (1).	Skirmish (4). General quarters (1).	Target great guns (4). General quarters (1).
	2	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
	3	Battalion artillery (2). Seamanship (3).	Battalion artillery (2). Seamanship (3).	Battalion artillery (2). Seamanship (3).	Battalion artillery (2). Seamanship (3).
	4	Steam tactics (3). General quarters (2).	Steam tactics (3). General quarters (2).	Steam tactics (3). General quarters (2).	Steam tactics (3). General quarters (2).
	5				
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to 10.

ANNUAL EXAMINATION.

June 10 to Aug. 28.		Practice cruise.			
Sept.		On leave.			

SECOND CLASS.

Months.	Weeks	First division.	Second division.	Third division.	Fourth division.
Oct	1	Company.	Battery.	Pivot guns.	Steam launches.
	2	Battery.	Company.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Steam launches.	Company.	Battery.
Nov	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
Jan .	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.

SEMI-ANNUAL EXAMINATION.

Feb	1	Steam	Seamanship	Steam	Broadsword.
	2	Small sword.	Steam.	Practical ordnance	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance	Steam	Small sword.	Steam.
Mar	1	Steam	Practical ordnance	Steam.	Small sword
	2	Broadsword (4)	Broadsword (4)	Broadsword (4)	Broadsword (4)
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters	General quarters	General quarters.	General quarters
Apr	1	Seamanship	Seamanship	Seamanship.	Seamanship
	2	Target great guns (4)	Skirmish (4)	Steam tactics (4)	Target machine guns (4)
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4)	Target great guns (4)	Target machine guns (4).	Steam tactics (4)
	5	Seamanship (1)	Seamanship (1)	Seamanship (1)	Seamanship (1)
	6	Steam tactics (4)	Target machine guns (4)	Target great guns (4).	Skirmish (4)
May	1	Seamanship (1)	Seamanship (1)	Seamanship (1).	Seamanship (1)
	2	Target machine guns (4)	Skirmish (4)	Skirmish (4).	Target great guns (4)
	3	General quarters (1).	General quarters (1)	General quarters (1).	General quarters (1)
	4	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4)
	5	Seamanship (1)	Seamanship (1)	Seamanship (1)	Seamanship (1)
	6	Battalion artillery (2)	Battalion artillery (2)	Battalion artillery (2).	Battalion artillery (2)
	7	Seamanship (1)	Seamanship (1)	Seamanship (1)	Seamanship (1)
	8	Steam tactics (1)	Steam tactics (1)	Steam tactics (1).	Steam tactics (1).
	9	General quarters (2).	General quarters (2)	General quarters (2).	General quarters (2)
5th week	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	General quarters.	General quarters.	General quarters.	General quarters.
	Th	Steam tactics	Steam tactics.	Steam tactics	Steam tactics
	F.	Battalion infantry	Battalion infantry	Battalion infantry	Battalion infantry
	S	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to 10

ANNUAL EXAMINATION.

SECOND CLASS.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Sept -----	1	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.
	2	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.
	3	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine guns p. m.	Machine-shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Navy signals; Army signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine guns.
	5	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	6	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.
	7	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.
	8	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.
	9	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.
	10	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	1	} On leave.	On leave.	On leave.	On leave.
	2				
	3				
	4				

THIRD CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct	1	Company.	Battery.	Pivot guns.	Boats.
	2	Battery.	Company.	Boats.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Boats.	Company.	Battery.
Nov....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Small sword.	Target small.

SEMI-ANNUAL EXAMINATION.

Feb	1	Target small arms.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar..	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target small arms (4).	Skirmish (4).	Seamanship (4).	Seamanship (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target small arms (4).	Boats (4).	Boat (4).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship.
	7	Seamanship.	Boats (1).	Target small arms (4).	Skirmish (4).
May ...	1	Boats (4).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	Target small arms (4).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	General quarters (1).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Battalion infantry (4).
	5	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).	Seamanship (1).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Battalion artillery (2).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Seamanship (3).
	8	General quarters (2).	General quarters (2).	General quarters (2).	Small sword (3).
(With	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	General quarters (2).
Nov.	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion infantry.
	W	General quarters.	General quarters.	General quarters.	Battalion artillery.
	Th	Boats.	Boats.	Boats.	General quarters.
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Boats.
	S.	Seamanship.	Seamanship.	Seamanship.	Battalion infantry.

ANNUAL EXAMINATION.

Jan. 1 to)
June 1 to)
Aug 31)
Sept.	On leave

FOURTH CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct -----	1	Company.	Battery.	Gymnastics.	Boats.
	2	Battery.	Company.	Boats.	Gymnastics.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Gymnastics.	Boats.	Company.	Battery.
Nov -----	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Gymnastics.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec -----	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
	4				
	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
SEMI-ANNUAL EXAMINATION.					
Feb -----	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Dancing.
	4	Dancing.	Rigging loft.	Dancing.	Gymnastics.
Mar -----	1	Gymnastics.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April -----	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Rigging loft (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Rigging loft (4).	Boats (4).	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship.
	7	Seamanship.	Boats (4).	Rigging loft (4).	Skirmish (4).
	8	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
May -----	1	Boats (4).	Seamanship (4).	Skirmish (4).	Rigging loft (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
	9	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	10	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	11	General quarters.	General quarters.	General quarters.	General quarters.
	12	Boats.	Boats.	Boats.	Boats.
	13	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
ANNUAL EXAMINATION.					
		Practice cruise.			
	1	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	2	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	3	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	4	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
	5	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	6	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.

* Swimming daily.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				During month of September, fourth class.	Total number of instructions, exclusive of practice of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
School of the company	4	5	5	9	23						23
School of the battalion, infantry	10	11	11	11	43						43
Skirmish drill	4	4	4	4	16						16
Broadsword	10	9			19						19
Small sword	5	10	18		33						33
Practical instruction in deviation of compass	4				4	(*)					4
Practical instruction, navigation	† 14	† 13				(*)					† 27
Practical instruction, surveying	† 10										† 10
Machine shop and running shop engines	30 and † 13	30			60		54				114 and † 13
Running steam launches		5			5		6				11
Practical instruction in chemistry			† 13								† 13
Gymnastics				20	20						20
Swimming									24		24
Dancing				20	20						20

*** Practice cruise.**

† Study periods.

The instructions in seamanship and gunnery on board of the *Wyoming*, *Pascag*, and *Stoddard* are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

V

415 ANNUAL REGISTER

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OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FORTIETH ACADEMIC YEAR.

1889-'90.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

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DEAN M. E. C. O. L
9-14-'932

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10, of that year, under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the war department for the purpose. The course was fixed at five years, of which only the first and the last were spent at the school, the intervening three being passed at sea. This arrangement was not strictly adhered to, the exigences of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen, of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed since September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the naval school:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school and the three intermediate years at sea. The school was placed under the supervision of the bureau of ordnance and hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the academy, and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the academy as a practice-ship, and the annual practice-cruises were begun.

After the system had been in operation a year, new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea-

in the middle of the course, thus making the four years of study consecutive. The practice-cruise supplied the place of the omitted sea-service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the academy was moved back to Annapolis, where it has since remained.

When the bureau of navigation was established, July 5, 1862, the academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the navy department, the administrative routine and financial management being still conducted through the bureau. On the 11th of March, 1869, this official connection with the bureau ceased, but was renewed by the general order of the navy department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third-assistant engineers was ordered to the academy for instruction. The course embraced the subjects of steam-engineering, mechanism, chemistry, mechanics, and practical exercises with the steam-engine and in the machine-shop. This class was graduated in June, 1868, together with two cadet-engineers who had entered the academy in 1867. After an interval of four years, in October, 1871, a new class of cadet-engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the academy in 1874 and the second in 1875. By an act of congress, approved February 24, 1874, the course of instruction for cadet-engineers was made four years instead of two; the new provision was first applied to the class entering the academy in the year 1874. This class was graduated in June, 1878.

By an act of congress, approved August 5, 1872, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the naval academy, but in lieu thereof naval cadets shall be appointed from each congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the naval academy shall thereafter be designated and called 'naval cadets'; and, from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and engineer corps of the navy and of the marine corps: *And provided further*, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which have occurred in the same grades during the preceding year, such appointments to be made from the graduates of the year at the conclusion of their six years' course, in order of merit, as determined by the academic board of the naval academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year 1872. And if there be a surplus of graduates, those who did not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea-pay, as now provided by law for cadet-midshipmen; and so much of section 1521 of the Revised Statutes as is inconsistent herewith is hereby repealed."

“That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the naval academy, with a proper certificate of graduation.”

The act of congress, approved March 2, 1889, provides that “the academic board of the naval academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the naval academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available.”

“That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years.”

SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command:

- Sept. 3, 1845.—Commander Franklin Buchanan.
- Mar. 15, 1847.—Commander George P. Uphur.
- July 1, 1850.—Commander Cornelius K. Stribling.
- Nov. 1, 1853.—Commander Louis M. Goldsborough.
- Sept. 15, 1857.—Captain George S. Blake.
- Sept. 9, 1865.—Rear-Admiral David D. Porter.
- Dec. 1, 1869.—Commodore John L. Worden.
- Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
- July 1, 1878.—Commodore Foxhall A. Parker.
- Aug. 2, 1879.—Rear-Admiral George B. Balch.
- June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
- Nov. 14, 1881.—Captain F. M. Ramsay.
- Sept. 9, 1886.—Commander W. T. Sampson.

BOARD OF VISITORS, JUNE, 1889.

Commodore GEORGE BROWN, U. S. Navy, *President.*

Hon. M. C. BUTLER, U. S. Senate, *Vice President.*

Hon. H. M. TELLER U. S. Senate. .
Hon. H. A. HERBERT House of Representatives.
Hon. C. H. GROSVENOR House of Representatives.
Hon. WM. MCADOO House of Representatives.
Professor OREN ROOT Hamilton College, New York.
T. C. MENDENHALL President Rose Polytechnic Institute, Indiana.
General F. A. WALKER President Massachusetts Institute Technology.
L. C. GARLAND, LL.D Chancellor Vanderbilt University, Tennessee.
General STEWART L. WOODFORD New York.
Governor JAMES A. BRAVER Pennsylvania.

ACADEMIC CALENDAR.
1889-1890.

1889.	
October	1.—Beginning of first term.....Tuesday.
1890.	
Jan. 27-Feb. 1.	Semi-annual examination .....Monday-Saturday.
February	1.—End of first term.....Saturday.
June	2-7.—Annual examination .....Monday-Saturday.
May	31.—End of academic year, 1889-90.....Saturday.
May	15.—Examination of candidates for admission as naval cadets .....Thursday.
September	2.—Examination of candidates for admission as naval cadets .....Tuesday.
October	1.—Beginning of first term, 1890-91 .....Wednesday.

The academic months end on the following days; viz.,

1889-1890.			
October	Nov. 2	February.....	Mar. 1
November	Nov. 30	March	Mar. 29
December	Dec. 28	April	Apr. 26
January	Jan. 25	May	May 24

1890-1891.			
October	Nov. 1	December	Dec. 27
November	Nov. 29	January	Jan. 24

CALENDAR FOR 1889-1890.

SEPTEMBER.							MARCH.							
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.	
1	2	3	4	5	6	7							1	
8	9	10	11	12	13	14	2	3	4	5	6	7	8	
15	16	17	18	19	20	21	9	10	11	12	13	14	15	
22	23	24	25	26	27	28	16	17	18	19	20	21	22	
29	30						23	24	25	26	27	28	29	
							30	31						
OCTOBER.							APRIL.							
		1	2	3	4	5			1	2	3	4	5	
6	7	8	9	10	11	12	6	7	8	9	10	11	12	
13	14	15	16	17	18	19	13	14	15	16	17	18	19	
20	21	22	23	24	25	26	20	21	22	23	24	25	26	
27	28	29	30	31			27	28	29	30				
NOVEMBER.							MAY.							
					1	2					1	2	3	
3	4	5	6	7	8	9	4	5	6	7	8	9	10	
10	11	12	13	14	15	16	11	12	13	14	15	16	17	
17	18	19	20	21	22	23	18	19	20	21	22	23	24	
24	25	26	27	28	29	30	25	26	27	28	29	30	31	
DECEMBER.							JUNE.							
1	2	3	4	5	6	7	1	2	3	4	5	6	7	
8	9	10	11	12	13	14	8	9	10	11	12	13	14	
15	16	17	18	19	20	21	15	16	17	18	19	20	21	
22	23	24	25	26	27	28	22	23	24	25	26	27	28	
29	30	31					29	30						
JANUARY.							SEPTEMBER.							
			1	2	3	4			1	2	3	4	5	6
5	6	7	8	9	10	11	7	8	9	10	11	12	13	
12	13	14	15	16	17	18	14	15	16	17	18	19	20	
19	20	21	22	23	24	25	21	22	23	24	25	26	27	
26	27	28	29	30	31		28	29	30					
FEBRUARY.							OCTOBER.							
						1				1	2	3	4	
2	3	4	5	6	7	8	5	6	7	8	9	10	11	
9	10	11	12	13	14	15	12	13	14	15	16	17	18	
16	17	18	19	20	21	22	19	20	21	22	23	24	25	
23	24	25	26	27	28		26	27	28	29	30	31		

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,

CAPTAIN W. T. SAMPSON.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT E. K. MOORE.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT R. G. PECK.

Commandant of Cadets,

COMMANDER H. GLASS.

Assistants to the Commandant of Cadets,

**LIEUTENANT-COMMANDER W. W. GILLPATRICK,
LIEUTENANT W. P. POTTER,
LIEUTENANT C. D. GALLOWAY,
LIEUTENANT DAVID DANIELS.**

SEAMANSHIP, NAVAL TACTICS AND NAVAL CONSTRUCTION.

Head of Department,

COMMANDER C. D. SIGSBEE.

Assistants,

**LIEUTENANT W. P. CLASON,
ASSISTANT NAVAL CONSTRUCTOR R. GATEWOOD,
LIEUTENANT T. M. POTTS.**

Instructor in Boating, Swimming and Gymnastics,

MATTHEW STEPHEN.

ORDNANCE AND GUNNERY.

Head of Department,

LIEUTENANT-COMMANDER C. S. SPERRY.

Assistants,

LIEUTENANT C. G. BOWMAN,
LIEUTENANT H. C. GEARING,
ENSIGN C. H. HARLOW.

Sword-Master,

A. J. CORBRISIER.

Assistant Sword-Masters,

J. B. RETZ,
G. HEINTZ.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Head of Department,

LIEUTENANT-COMMANDER A. WALKER.

Assistants,

LIEUTENANT-COMMANDER W. T. SWINBURNE,
LIEUTENANT G. B. HARBER,
LIEUTENANT W. F. LOW.

STEAM-ENGINEERING.

Head of Department,

CHIEF ENGINEER H. W. FITCH.

Assistants,

PASSED-ASSISTANT ENGINEER J. K. BARTON,
PASSED-ASSISTANT ENGINEER R. G. DENIG,
PASSED-ASSISTANT ENGINEER W. N. LITTLE,
PASSED-ASSISTANT ENGINEER F. H. ELDRIDGE,
ASSISTANT ENGINEER W. H. ALLDERDICE.

MECHANICS AND APPLIED MATHEMATICS.

Head of Department,

PROFESSOR J. M. RICE, S. B., PH. D.

Assistants,

LIEUTENANT-COMMANDER J. P. MERRELL,
LIEUTENANT E. P. WOOD,
ENSIGN JOHN HOOD,
ENSIGN E. E. CAPEHANT.

14 OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

PHYSICS AND CHEMISTRY.

Head of Department,

PROFESSOR N. M. TERRY, A. M., PH. D.

Assistants,

LIEUTENANT T. B. HOWARD,
LIEUTENANT W. G. CUTLER,
LIEUTENANT B. T. WALLING,
LIEUTENANT O. G. DODGE,
ENSIGN R. H. MINER,
PROFESSOR C. R. SANGER, A. M., PH. D.

MATHEMATICS.

Head of Department,

PROFESSOR W. W. HENDRICKSON.

Assistants,

LIEUTENANT J. GARVIN,
LIEUTENANT H. H. HOLLEY,
LIEUTENANT J. M. ORCHARD,
ENSIGN H. G. DRESEL,
ENSIGN H. PHIPPS,
ENSIGN C. S. WILLIAMS.

ENGLISH STUDIES, HISTORY, AND LAW.

Head of Department,

CHAPLAIN E. K. RAWSON, B. A.

Assistants

LIEUTENANT R. WAINWRIGHT,
LIEUTENANT J. B. BRIGGS,
LIEUTENANT J. C. CHESAP,
LIEUTENANT E. B. UNDERWOOD,
ENSIGN E. WILKINSON,
PROFESSOR W. W. FAY, A. M.

MODERN LANGUAGES.

Head of Department,

LIEUTENANT-COMMANDER R. H. C. LEUTZÉ.

Assistants,

LIEUTENANT A. C. BAKER
PROFESSOR L. F. PRODHOMME, A. M.
ENSIGN W. E. SAFFORD,
PROFESSOR J. LEROUX,
ASSISTANT PROFESSOR H. DAIMON,
ASSISTANT PROFESSOR H. MALDON,
ASSISTANT PROFESSOR S. GARNER.

MECHANICAL DRAWING.

Head of Department

LIEUTENANT G. P. COLVOCORESSES

Assistants

PROFESSOR M. OLIVER,
ASSISTANT PROFESSOR C. P. HAVVELL

PHYSIOLOGY AND HYGIENE.

Head of Department,

MEDICAL INSPECTOR B. H. KIDDER, M. D.

Assistants,

SURGEON G. E. H. HARMON, M. D.,
 PASSED-ASSISTANT SURGEON C. W. RUSH, M. D.,
 PASSED-ASSISTANT SURGEON J. D. GATEWOOD, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

OFFICERS NOT ATTACHED TO THE ACADEMIC STAFF.

LIEUTENANT-COMMANDER S. W. VERY, *in charge of Ships.*
 PAY INSPECTOR J. H. STEVENSON, *Commissary and General Storekeeper.*
 PAY INSPECTOR T. T. CASWELL, *Pay Officer.*
 ASSISTANT SURGEON C. H. T. LOWNDES, M. D.
 ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*
 J. M. SPENCER, *Assistant Librarian.*
 R. M. CHASE, *Secretary.*

Attached to the Ships,

BOATSWAIN J. S. SINCLAIR,
 GUNNER R. SOMMERS,
 CARPENTER G. W. CONOVER.

MATES.

Attached to the Santee, the Wyoming, and the Phlox,

S. GEE,	B. G. PERRY,
C. J. MURPHY,	W. G. SMITH.

MARINE OFFICERS.

CAPTAIN H. A. BARTLETT, *Commanding Marines,*
 CAPTAIN J. M. T. YOUNG,
 SECOND LIEUTENANT T. C. PRINCE.

ACADEMIC BOARD.

THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL TACTICS, AND NAVAL CONSTRUCTION.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM-ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

CADET OFFICERS.

CADET-LIEUTENANT-COMMANDER.

T. F. RUHM.

CADET-LIEUTENANTS.

A. GARTLEY.
M. H. SIGNOR.

F. H. SCHOFIELD,
C. B. MCVAY.

CADET-MASTER AND ADJUTANT.

W. H. BUCK.

CADET-MASTERS.

H. J. ZIEGENBIER,
C. DAVIS.

L. SPEAR,
W. C. NEVILLE.

CADET-ENSIGNS.

J. V. CHASE,
L. H. EVERHART.

M. M. TAYLOR,
N. T. COLEMAN.

Cadet-petty-officers of the first class.

SNOW,
LATIMER,
RADFORD,
WILLIAMS.

PRICE,
CATLIN,
VOGELIUSANO,
BLANKENSHIP.

SULLIVAN,
MOFFETT,
BITTER,
HOLMES.

BOSTWICK,
EDIE,
BAILEY,
DAYTON.

Cadet-petty-officers of the second class.

ZAHM,
GILLMORE.

STEARNS,
NINDE.

SMITH, L. G.,
BELKNAP.

WILLARD,
HARTUNG.

SUMMER CRUISE, 1889.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE-SHIP CONSTELLATION.

May 7 to June 24.

COMMANDER P. F. HARRINGTON, *Commanding.*
LIEUTENANT-COMMANDER W. T. SWINDURN,
Executive Officer.
LIEUTENANT W. F. LOW, *Navigator.*
LIEUTENANT A. MCCABEIN, *Watch Officer.*
LIEUTENANT T. B. HOWARD, *Watch Officer.*
LIEUTENANT T. M. POTTS, *Watch Officer.*
LIEUTENANT J. M. ORCHARD, *Watch Officer.*
ENSIGN HARRY PHELPS, *Instructor in Navigation.*
ENSIGN E. E. CAPHART, *Watch Officer.*
CHAPLAIN E. K. RAWSON.
SURGEON G. E. H. HARMON.
STAFF SURGEON C. H. T. LOWDER.
FAST PAYMASTER J. S. CARPENTER.

August 14 to September 20.

COMMANDER C. D. SIGNER, *Commanding.*
LIEUTENANT-COMMANDER W. T. SWINDURN,
Executive Officer.
LIEUTENANT W. F. LOW, *Navigator.*
LIEUTENANT T. B. HOWARD, *Watch Officer.*
LIEUTENANT T. M. POTTS, *Watch Officer.*
LIEUTENANT J. M. ORCHARD, *Watch Officer.*
ENSIGN JOHN HODD, *Watch Officer.*
ENSIGN HARRY PHELPS, *Instructor in Navigation.*
ENSIGN E. E. CAPHART, *Watch Officer.*
CHAPLAIN E. K. RAWSON.
SURGEON G. E. H. HARMON.
ASSISTANT SURGEON C. H. T. LOWDER.
ASSISTANT PAYMASTER J. S. CARPENTER.

RELATIVE STANDING OF NAVAL CADETS AT THE ANNUAL EXAMINATION, JUNE, 1889.

- P denotes physically disqualified for the naval service.*
† Found deficient, allowed a re-examination, passed, and continued with class.
‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.
§ Found deficient and recommended to be dropped.
a denotes absence from examination-

Class of naval cadets appointed 1884, performing required service afloat.

Order of merit.	Name.	State from which appointed.	Date of admission.
*1	Vansant, William Newton.....	Pennsylvania.....	Sept. 4, 1884
*2	Marble, Frank.....	New York.....	Sept. 4, 1884
3	Robertson, Ashley Herman.....	Illinois.....	Sept. 4, 1884
4	Brittain, Carlo Bonaparte.....	Kentucky.....	May 19, 1884
5	Morgan, Casey Bruce.....	Mississippi.....	Sept. 4, 1884
6	Croce, William Michael.....	Indiana.....	May 19, 1884
7	Miller, Marcus Lyon.....	Massachusetts.....	Sept. 4, 1884
8	Hayward, George North.....	New York.....	May 19, 1884
9	Kæster, Oscar William.....	Pennsylvania.....	April 5, 1884
10	Beswick, Delworth Wilson.....	Michigan.....	May 20, 1884
11	Hubbard, John Flavel.....	New York.....	Sept. 5, 1884
12	Lejeune, John Archer.....	Louisiana.....	May 19, 1884
13	Robison, Samuel Shelburn.....	Pennsylvania.....	Sept. 4, 1884
14	Chandler, Lloyd Horwitz.....	New Hampshire.....	Sept. 4, 1884
15	Hartrath, Armin.....	Michigan.....	Sept. 4, 1884
16	Ingate, Clarence Louis Adrian.....	Alabama.....	May 20, 1884
17	Benham, Henry Kennedy.....	New York.....	May 19, 1884
18	West, Ernest Edward.....	Georgia.....	May 23, 1884
19	Hughes, Charles Frederic.....	Maine.....	Sept. 6, 1884
20	Norton, Albert Leland.....	Ohio.....	May 23, 1884
21	Stafford, Leroy Augustus.....	Louisiana.....	Sept. 15, 1884
22	Oole, Eli Kelley.....	New York.....	Sept. 4, 1883
23	Franklin, William Buell.....	Maryland.....	May 20, 1884
24	Reid, James Henry.....	Virginia.....	Sept. 4, 1884
25	Stickney, Herman Osman.....	Kentucky.....	Sept. 4, 1884
26	Beach, Edward Latimer.....	Minnesota.....	May 20, 1884
27	Bassett, Frederick Brewster, jr.....	New York.....	May 19, 1884
28	Gates, Herbert Grenville.....	Michigan.....	Sept. 4, 1884
29	Wiley, Henry Ariosto.....	Texas.....	May 17, 1883
20	Kane, Theodore Porter.....	New York.....	May 19, 1884

RELATIVE STANDING,

Class appointed in 1885, 35 members,

Order of general merit.	Name.	State.	Date of admission.
1	Hobson, Richmond Pearson	Alabama	May 21, 1885
2	Rock, George Henry	Michigan	May 20, 1885
3	Hoff, Arthur Bainbridge	At large	Sept. 28, 1885
4	Twining, Nathan Crook	Wisconsin	Sept. 4, 1885
5	Hutchison, Benjamin Franklin	Missouri	Sept. 5, 1885
6	Pratt, William Veasey	Maine	Sept. 9, 1885
7	Kittelle, Sumner Ely	New York	May 19, 1885
8	Marvell, George Ralph	Massachusetts	Sept. 7, 1885
9	Nulton, Louis McCoy	Virginia	Sept. 8, 1885
10	Lucas, Lewis Clark	Ohio	Sept. 9, 1885
11	Patton, John Bryson	South Carolina	May 21, 1885
12	Neumann, Bertram Stansbury	New Jersey	May 22, 1885
13	Long, Charles Grant	Massachusetts	Sept. 7, 1885
14	MacDougall, William Dugald	New York	May 19, 1885
15	Danforth, George Washington	Missouri	Sept. 7, 1885
16	Magruder, Thomas Pickett	Mississippi	Sept. 8, 1885
17	Lowndes, Edward Rutledge	Michigan	Sept. 28, 1885
18	de Steiguer, Louis Rudolph	Ohio	Mar. 17, 1885
19	Bradshaw, George Brown	Texas	Sept. 4, 1885
20	Phelps, William Woodward	Maryland	May 19, 1885
21	Kaiser, Louis Anthony	Illinois	May 20, 1885
22	Olley, Cleland Nelson	Indiana	Sept. 8, 1885
23	Cole, William Carey	Illinois	Sept. 5, 1885
24	Mitchell, George Grant	Indiana	Sept. 7, 1885
25	Fuller, Ben Hobard	Michigan	May 22, 1885
26	Brand, Charles Augustine	Connecticut	Sept. 8, 1885
27	Williams, Philip	Vermont	Sept. 4, 1885
28	Carney, Robert Ernest	Wisconsin	May 21, 1885
29	Terhune, Warren Jay	New Jersey	May 19, 1885
30	Dutton, Robert McMillan	California	Sept. 4, 1885
31	Harrison, William Kelley	Texas	May 22, 1885
32	Kirk, George William	Missouri	Sept. 7, 1885
33	Prechaska, Julius	Wisconsin	Sept. 7, 1885
34	Anderson, Ernest Bentley	Kentucky	May 22, 1885
35	Fernier, George Lucian	Indiana	May 21, 1885

b Resigned.

performing required service afloat.

Age at date of admission.		Order of merit.											Sea service in practice-ships.		Order of general merit.
Years.	Months.	Seamanship, ship-building, and naval architecture.	Seamanship, practice-cruises.	Ordnance and gunnery.	Astronomy, navigation, and surveying.	Navigation, practice-cruises.	Practical instruction in steam-engineering.	Least squares and strength of materials.	Physical measurements.	Physiology and hygiene.	Conduct.	Number of demerits.	Months.	Days.	
14	9	1	1	1	2	4	3	1	2	2	5	9	8	0	1
16	6	2	3	2	1	3	1	2	1	7	3	7	8	0	2
15	9	3	2	4	4	2	31	3	3	3	2	6	3	28	3
16	8	4	9	3	6	6	5	5	6	5	12	26	5	7	4
17	7	9	10	7	3	4	3	4	4	4	7	10	5	7	5
16	6	7	7	5	7	1	15	10	7	6	21	39	5	7	6
17	11	6	4	14	13	13	5	21	5	1	1	1	8	0	7
16	0	14	11	15	9	8	15	10	19	12	4	8	5	7	8
16	1	16	17	12	16	10	5	5	11	27	10	19	5	7	9
17	10	4	16	6	12	20	5	17	21	12	11	20	5	7	10
17	11	17	12	11	10	13	19	22	33	33	17	29	8	0	11
17	7	12	8	18	29	12	19	32	22	17	7	19	8	0	12
15	9	27	23	21	18	16	13	14	9	22	14	28	5	7	13
16	11	8	21	24	31	29	5	19	23	8	24	45	8	0	14
17	7	19	22	26	26	34	12	28	14	25	17	29	5	7	15
17	10	13	18	8	5	23	35	16	13	23	26	46	5	7	16
17	8	22	20	19	19	27	19	9	11	30	31	63	5	7	17
18	0	26	29	21	15	15	22	8	14	23	19	33	8	0	18
15	4	19	33	9	14	31	22	12	17	32	33	95	5	7	19
15	6	10	19	12	11	20	25	18	24	15	23	44	8	0	20
15	1	30	31	17	23	19	32	15	34	20	35	98	8	0	21
16	3	25	30	23	22	33	5	26	32	29	14	28	5	7	22
17	1	23	12	29	23	23	25	20	8	9	30	60	5	7	23
16	0	27	24	16	17	11	15	27	10	25	5	9	5	7	24
15	3	19	32	9	8	7	25	7	16	18	32	85	7	7	25
17	4	18	15	21	21	9	25	13	18	10	26	54	5	7	26
15	7	15	35	19	24	25	13	24	31	21	29	59	5	7	27
16	5	10	6	25	20	30	15	35	20	16	22	41	7	9	28
16	1	29	28	29	30	35	25	24	27	12	34	96	8	0	29
15	10	31	25	27	35	28	32	31	29	11	27	55	5	7	30
14	10	33	27	31	27	26	25	23	26	27	20	34	8	0	31
17	1	35	25	32	33	32	32	30	27	34	28	57	3	22	32
16	10	32	14	34	25	18	5	28	30	31	9	16	5	7	33
16	8	33	34	34	31	22	22	33	35	18	14	28	8	0	34
17	2	23	5	33	34	16	2	34	24	35	12	26	7	7	35

First Class—

Order of annual merit.	Name.	State.	Date of admission.
20	Bailey, Claude	Arkansas	Sept. 8, 1896
14	Blankenship, John Millington	Virginia	May 20, 1896
17	Bond, Charles Otis	Iowa	Sept. 8, 1896
24	Boatwick, Lucius Allyn	Massachusetts	Sept. 7, 1896
18	Buck, William Henry	Mississippi	May 22, 1896
19	Catlin, Albertus Wright	Minnesota	May 24, 1896
6	Chase, John Valentine	Louisiana	Sept. 28, 1896
3	Coleman, Noah Tunnicliff	New York	May 21, 1896
8	Davis, Cleland	Kentucky	May 22, 1896
29	Dayton, John Havens	At large	Sept. 12, 1896
e 31	Dismukes, Doctor Eugene	Mississippi	May 21, 1896
1	Edie, John Rufus	At large	May 19, 1896
26	Everhart, Lay Hampton	Alabama	May 20, 1896
7	Gartley, Alonzo	Iowa	May 22, 1896
e 8	Holmes Urban Tigner	Arkansas	Sept. 12, 1896
27	Latimer, Julius Lane	West Virginia	Sept. 20, 1896
4	McDonald, Erwin Huntington	New York	Sept. 7, 1896
1	McVay, Charles Butler	Colorado	May 19, 1896
20	Moffett, William Adger	South Carolina	Sept. 6, 1896
15	Moses, Lawrence Henry	New York	Sept. 29, 1896
25	Neville, Wendell Cushing	Virginia	Sept. 12, 1896
e 12	Price, Claude Bernard	Mississippi	June 2, 1896
21	Radford, Cyrus Lugg	Kentucky	May 25, 1896
1	Rising, Franklin Sydney	Nevada	May 20, 1896
22	Ritter, Henry Snyder	Pennsylvania	May 25, 1896
e 1	Ruhn, Thomas Francis	Tennessee	May 20, 1896
4	Schofield, Frank Herman	New York	May 21, 1896
10	Signor, Matt. Howland	Nebraska	May 21, 1896
24	Snow, William Alanson	Massachusetts	Sept. 4, 1896
2	Spear, Lawrence	Ohio	May 19, 1896
13	Sullivan, Franklin Buchanan	At large	May 22, 1896
11	Taylor, Montgomery Meigs	do	May 21, 1896
23	Treadwell, Thomas Conrad	Massachusetts	May 21, 1896
1	Vogelgesang, Charles Theodore	California	Sept. 6, 1896
16	Williams George Washington	South Carolina	Sept. 28, 1896
9	Ziegemeier Henry Joseph	Ohio	May 21, 1896
e	Eaton, Frederick Lloyd, Jr	Michigan	Sept. 8, 1896
e	Kochersperger, Frank Henry	Pennsylvania	May 20, 1896
e	Ryan Eugene Dewey	New York	Sept. 4, 1896
e	Sannders, William Turner	At large	May 21, 1896

e Selected for engineer division.

e Absent from examination; retained in second class

35 members.

Age at date of admission.		Order of merit.								Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Astronomy.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Conduct.		Months.	Days.	
15	10	27	20	18	14	29	20	20	17	62	4	12	20
17	9	22	13	12	28	22	24	2	6	29	6	29	14
15	9	17	24	7	18	16	27	21	15	58	3	4	17
16	6	23	12	22	32	20	32	19	34	122	4	12	28
17	7	21	26	12	28	14	16	27	11	35	6	29	18
17	5	10	28	2	15	18	27	24	20	72	6	29	19
17	8	5	6	6	7	5	12	12	23	74	4	12	6
16	2	2	2	18	6	4	13	5	27	93	6	29	8
16	6	15	10	15	8	7	10	3	25	82	6	29	8
17	11	11	24	27	20	23	26	34	34	132	4	12	29
16	7	23	32	23	24	26	34	32	22	73	6	29	31
15	7	26	36	24	25	36	9	15	24	75	4	14	†
16	5	26	15	29	28	30	36	8	16	61	6	29	26
16	7	13	5	9	3	13	33	1	29	102	6	29	7
17	4	8	7	7	5	8	18	7	20	72	4	12	25
17	11	18	22	24	22	25	24	35	18	68	4	12	27
16	10	25	14	34	35	24	16	29	33	128	2	15	6
17	7	32	31	15	19	33	11	19	2	15	3	29	†
16	10	33	34	2	33	35	31	13	3	24	4	12	30
16	2	15	17	36	9	10	1	36	22	127	4	12	15
16	11	31	27	29	31	28	19	18	7	30	4	12	25
17	7	20	8	31	25	18	15	25	10	34	6	29	12
17	11	29	19	18	21	26	35	10	7	30	6	29	21
16	11	29	32	17	34	30	22	10	26	87	5	21	†
16	3	28	28	28	22	30	27	23	1	0	6	29	22
16	6	4	1	14	1	1	2	14	13	50	6	29	1
17	4	1	2	2	11	3	4	8	12	36	6	29	4
15	5	6	20	35	4	6	6	23	36	190	6	29	10
16	7	34	35	9	15	33	22	5	5	27	4	12	24
15	6	2	4	18	2	2	2	16	13	50	6	29	2
14	10	12	10	33	10	11	27	17	28	96	5	29	13
16	7	19	9	2	15	15	7	4	39	109	6	29	11
16	11	18	23	34	25	17	21	33	18	68	6	29	23
17	7	25	30	1	36	21	5	25	9	31	4	12	†
17	1	9	16	32	12	12	14	31	31	114	4	12	16
17	1	7	18	9	12	9	8	22	4	26	6	12	9
16	5	a	a	a	a	a	a	a	a	46	2	15	a
16	3	a	a	a	a	a	a	a	a	3	5	2	a
16	6	a	a	a	a	a	a	a	a	38	2	15	a
16	1	a	a	a	a	a	a	a	a	90	5	2	a

Order of annual merit.	Name.	State.	Date admission.
40	Allen, David Van Horn.....	Tennessee.....	Sept. 8, 1887
33	Althouse, Adelbert.....	Illinois.....	May 21, 1887
31	Anthony, Archibald.....	New York.....	June 8, 1887
32	Bock, William Walker.....	Maryland.....	Sept. 8, 1887
26	Boltnap, Margaret Rowan.....	Arkansas.....	Sept. 8, 1887
28	Blarer, Eliza Barnett.....	Kansas.....	Sept. 24, 1887
27	Blamer, De Witt.....	Iowa.....	May 19, 1887
29	Bleunt, Irving.....	Indiana.....	Sept. 8, 1887
30	Brotherton, William Daniel.....	Wisconsin.....	Sept. 8, 1887
34	Caldwell, Harry Handy.....	Illinois.....	Sept. 7, 1887
1	Candem, Bernard Holt.....	West Virginia.....	Aug. 27, 1887
23	Carter, James Francis.....	Pennsylvania.....	Mar. 24, 1887
12	Christy, Harley Hannibal.....	Ohio.....	May 24, 1887
20	Eurich, Charles Rolf.....	Illinois.....	May 19, 1887
22	Evans, Waldo.....	Kansas.....	Sept. 7, 1887
24	Flowers, Robert Lee.....	North Carolina.....	Sept. 7, 1887
25	Ford, William Howland.....	Iowa.....	Sept. 7, 1887
27	Gillmer, Norrie Gonzalo.....	Wisconsin.....	Sept. 8, 1887
31	Gross, Louis Herman.....	Illinois.....	May 19, 1887
30	Hartung, Benwick John.....	Iowa.....	Sept. 8, 1887
14	Hough, Henry Hughes.....	Massachusetts.....	Sept. 8, 1887
21	Irwin, Noble Edward.....	Ohio.....	Sept. 29, 1887
2	Kellogg, Thomas Steele.....	At large.....	May 21, 1887
11	Kennell, Henry Charles.....	Wisconsin.....	Sept. 8, 1887
26	Lane, Rufus Herman.....	Ohio.....	June 2, 1887
45	Lava, George William.....	Iowa.....	May 21, 1887
37	Leigh, Richard Henry.....	Mississippi.....	Sept. 8, 1887
43	Lyle, Charles William.....	Virginia.....	Sept. 8, 1887
40	Macfarland, Horace Greeley.....	New York.....	Sept. 8, 1887
1	Magill, Louis John.....	Pennsylvania.....	June 17, 1887
24	McGrann, William Hugh.....	Tennessee.....	May 20, 1887
30	McKivry, William Nepler.....	Pennsylvania.....	May 20, 1887
15	McLennan, Albert Sidney.....	Tennessee.....	May 23, 1887
10	Meale, John Gray Foster.....	California.....	Sept. 8, 1887
44	Myers, John Twigg.....	Georgia.....	Sept. 27, 1887
20	Nade, Daniel Benjamin.....	Indiana.....	May 20, 1887
4	Nire, Kaga Kasa.....	Empire of Japan.....	May 21, 1887
13	Pellock, Edwin Taylor.....	Ohio.....	May 20, 1887
19	Prentiss, Charles Francis.....	Maryland.....	Sept. 8, 1887
16	Rord, Milton Rogers.....	Iowa.....	Sept. 8, 1887
3	Rosen, William James.....	Texas.....	Sept. 8, 1887

d Deficient; continued with class.

Y	M	Order of merit.						Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
		Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Conduct.		Months.	Days.	
17	8	46	49	41	28	58	51	150	2	20	46
18	0	33	44	50	43	21	18	35	5	5	33
16	10	45	32	48	11	12	53	155	5	0	31
17	7	51	55	60	59	45	56	170	3	6	52
18	3	8	6	8	3	7	29	30	2	20	*5
17	6	25	17	28	36	36	31	■	1	2	25
15	4	4	6	30	22	25	36	84	5	5	*6
17	8	29	35	38	29	47	8	25	2	20	30
15	11	29	44	30	34	29	32	77	2	20	29
14	7	45	28	30	■	42	31	76	2	20	34
18	0	31	59	■	55	50	54	162	1	2	:
18	0	42	33	16	34	47	28	51	5	5	32
16	8	8	19	12	22	17	3	20	5	5	12
16	8	18	12	24	26	20	49	134	4	21	23
17	10	17	15	37	31	25	24	48	2	20	22
16	10	21	29	33	■	44	25	50	2	10	26
15	7	54	51	48	25	31	17	■	2	20	38
17	8	1	2	1	7	9	18	31	2	20	*2
18	2	46	39	51	43	56	59	175	4	21	31
17	0	15	20	22	33	24	14	33	2	20	20
16	8	28	38	18	1	6	5	23	2	20	14
16	0	11	26	42	44	14	34	51	2	6	■
15	9	58	55	65	49	51	55	164	5	5	:
16	4	12	22	5	5	11	29	■	2	■	11
16	7	38	14	35	40	39	42	161	5	5	36
17	8	42	41	43	38	43	57	172	5	5	45
17	1	19	35	40	46	34	7	24	1	2	27
17	1	50	41	45	58	55	30	73	1	6	48
14	8	37	31	36	41	39	60	209	2	6	49
16	4	51	57	29	26	23	43	193	3	5	:
17	7	34	39	■	18	■	33	79	2	20	24
17	11	48	50	30	32	41	21	■	5	5	39
18	0	20	9	9	2	27	44	106	2	15	15
16	8	21	27	34	11	2	19	38	2	15	16
16	8	54	51	32	46	38	47	131	2	20	■
16	10	7	■	6	8	8	26	62	5	5	*6
17	8	25	60	58	60	22	41	90	5	5	2
18	7	■	11	8	6	27	11	29	2	4	*19
16	4	14	23	39	24	15	10	26	2	17	19
17	10	38	15	13	19	4	2	13	2	20	16
17	■	37	56	53	58	57	61	224	2	20	:

Order of annual merit.	Name.	State.	Date of admission.
43	Richards, George	Ohio	Sept. 12, 1887
53	Robinson, Roby	Alabama.....	May 21, 1887
a	Robison, John Keeler	Michigan	May 20, 1887
7	Rosen, John Howard	Pennsylvania.....	Sept. 27, 1887
60	Russell, Edward Gaston.....	Georgia.....	Sept. 7, 1887
41	Senn, Thomas Jones.....	South Carolina.....	May 12, 1887
25	Shepard, George Hugh	Wisconsin	Sept. 27, 1887
60	Smith, Harry Eaton	Ohio	May 20, 1887
4	Smith, Henry Gerriah	Ohio	Sept. 8, 1887
13	Smith, Lucien Greathouse	Illinois.....	June 2, 1887
:	Sparkman, Sullivan Thomas.....	South Carolina.....	Sept. 24, 1887
9	Stearns, Clark Daniel	Michigan	Sept. 8, 1887
25	Sypker, Jay Hale.....	Arizona	Sept. 5, 1887
67	Theall, Eliza	New York	May 20, 1887
42	Trickle, Edward.....	Illinois.....	May 20, 1887
23	Watt, Richard Morgan	Pennsylvania.....	Sept. 22, 1887
:	Wells, Chester	Pennsylvania.....	Sept. 10, 1887
17	Willard, Arthur Lee.....	Missouri.....	Sept. 7, 1887
27	Williams, Dion	Ohio	July 10, 1887
21	Zahn, Frank Baker.....	Pennsylvania.....	Sept. 8, 1887

a Absent second term, sick; continued with class, subject to examination.
b Resigned.

58 members—Continued.

Age at date of admission.		Order of merit.						Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Conduct.		Months.	Days.	
15	7	24	24	57	51	18	52	154	1	2	43
16	0	38	47	50	56	53	46	120	5	5	52
16	6	a	a	a	a	a	27	60	5	5	a
16	8	3	8	45	45	1	39	89	2	20	*7
17	9	46	44	47	50	54	48	183	2	20	650
15	5	21	40	27	48	50	38	88	5	5	41
15	9	44	21	17	16	47	57	172	1	2	35
17	5	34	39	53	56	9	35	82	5	5	40
17	5	6	4	15	9	18	8	25	2	20	*4
17	6	16	13	4	15	22	12	20	5	5	13
17	9	50	36	22	17	40	23	46	2	20	†
17	8	13	9	9	9	8	5	23	2	20	*9
16	6	36	24	20	30	37	37	86	2	20	28
14	5	54	53	56	50	34	40	94	5	5	47
17	7	48	54	48	38	30	18	37	5	5	42
15	8	5	5	13	14	12	1	12	2	20	*3
16	11	60	47	24	53	52	45	118	2	20	†
17	7	26	3	3	13	45	14	32	1	2	17
17	5	51	30	18	37	15	49	134	2	10	37
16	3	2	1	2	4	4	3	20	2	20	*1

Order of annual merit.	Name.	State.	Date of admission.
23	Allen, Charles.....	Ohio.....	Mar. 15, 1888
25	Arlson, Edgar Emmett.....	Pennsylvania.....	May 18, 1888
30	Bail, Walter.....	New York.....	Sept. 6, 1888
34	Bannon, Philip Michael.....	Maryland.....	May 21, 1888
41	Beuret, John Dougal.....	Ohio.....	Sept. 7, 1888
9	Blakely, John Russell Young.....	Pennsylvania.....	Sept. 20, 1888
26	Borden, Thomas Sheppard.....	Louisiana.....	Sept. 25, 1888
37	Breckinridge, Joseph Cabell.....	Kentucky.....	Sept. 5, 1888
11	Campbell, Joseph Randolph.....	Wyoming.....	Sept. 29, 1888
31	Chadbourne, Ralph Collins.....	Maine.....	May 21, 1888
15	Crank, Robert Kyle.....	Texas.....	Sept. 6, 1888
46	Curlett, John.....	Virginia.....	May 18, 1888
47	Davis, Austin Rockwell.....	Georgia.....	May 21, 1888
37	Davison, Gregory Caldwell.....	Missouri.....	May 22, 1888
43	Dawson, William Charles.....	Missouri.....	Sept. 6, 1888
47	Day, George Calvin.....	Vermont.....	May 19, 1888
51	Dennett, Stanley Pullen.....	Maine.....	May 19, 1888
17	Evans, Holden A.....	Florida.....	Sept. 5, 1888
44	Ferguson, Homer Lenoir.....	North Carolina.....	May 21, 1888
12	Gamble, Aaron Lichtenberger.....	Indiana.....	Sept. 5, 1888
28	Gibbs, Washington Dorsey.....	Mississippi.....	May 18, 1888
64	Goodwin, Leonard.....	Pennsylvania.....	May 18, 1888
60	Hasbrouck, Raymond De Lancy.....	Idaho Territory.....	Sept. 25, 1888
22	Hines, John Fore.....	Kentucky.....	May 21, 1888
26	Hoblitzelle, William Edward.....	Missouri.....	Sept. 6, 1888
24	Huffington, Howard Williams.....	Pennsylvania.....	May 19, 1888
18	Hussey, Charles Lincoln.....	New Hampshire.....	May 21, 1888
45	Jewell, Charles Theodore.....	At large.....	May 19, 1888
20	Jones, Beriah Ellwood.....	Pennsylvania, at large.....	May 19, 1888
58	Kellogg, Edward Stanley.....	New York.....	Sept. 5, 1888
48	Kilbourne, Joseph Coolidge.....	Ohio.....	May 21, 1888
20	Larkin, Rosier Bonaparte.....	Virginia.....	May 21, 1888
4	Logan, William Vance.....	Indiana.....	Sept. 6, 1888
19	Low, Theodore Henry.....	Connecticut.....	May 18, 1888
55	Macklin, Charles Fearn.....	New York.....	Sept. 25, 1888
51	Mallison, George.....	North Carolina.....	May 21, 1888
46	Mather, George Herbert.....	New Jersey.....	May 22, 1888
22	McCormick, Benjamin Bernard.....	New York.....	May 19, 1888
8	McDonald, Joseph Eschial.....	Illinois.....	Sept. 7, 1888
40	McNamee, Luke.....	Kansas.....	Sept. 6, 1888
29	McReavy, Herbert Ellsworth.....	Washington Territory.....	May 18, 1888
4	Moss, Stanford Ellwood.....	Georgia.....	Sept. 6, 1888
4	Nevitt, Rollin Roy.....	Missouri.....	Sept. 7, 1888
41	Parna, Fred Rounselle.....	New York.....	May 21, 1888
4	Pollard, Charles Teed, jr.....	Texas.....	Sept. 25, 1888
16	Pollock, Emmett Riddle.....	Illinois.....	May 18, 1888
	Porter, John Singleton.....	Tennessee.....	Sept. 25, 1888

61 members.

Years.	Month	Engin	Algebra	Prosol	Geode	Numb	Month	Days.	Order.
17	11	34	19	19	40	68	4	17	28
15	2	36	30	7	56	157	4	17	25
16	1	52	31	53	■	■	1	27	50
16	2	56	53	57	23	42	4	17	24
17	7	2	1	8	32	■	1	27	*1
16	2	24	4	23	41	60	1	27	9
16	6	21	51	19	52	114	1	27	26
16	6	11	41	32	64	241	1	■	27
16	6	10	14	21	44	74	1	■	11
17	2	9	56	43	7	29	4	17	31
16	8	27	26	6	46	83	1	27	15
18	8	43	56	37	10	24	2	20	46
16	9	63	18	32	60	165	4	17	47
17	9	27	11	60	35	61	4	■	27
17	5	1	12	3	42	70	1	27	*3
16	6	4	2	26	32	56	4	17	*7
15	11	49	20	56	26	62	4	17	51
16	9	12	13	44	11	25	1	27	17
15	2	3	7	4	20	39	4	17	*4
15	■	7	21	22	45	82	1	■	12
16	3	57	8	37	49	99	4	17	26
16	11	59	53	20	■	83	4	17	44
17	2	43	37	59	43	71	1	27	49
17	7	33	14	41	1	8	4	17	23
17	1	38	42	42	4	14	1	27	25
15	9	18	28	54	26	49	4	17	24
17	3	13	■	34	27	50	4	17	18
15	2	8	3	13	51	196	■	12	*5
17	4	42	36	34	22	■	1	27	29
17	11	61	43	62	6	18	0	19	58
16	10	41	44	30	56	149	4	17	45
16	9	31	46	9	63	221	4	17	25
16	7	64	64	64	31	55	0	0	5
17	8	15	10	37	54	117	4	17	■
17	5	62	37	■	29	51	1	27	■
17	4	38	46	■	53	116	4	17	51
15	1	47	48	■	14	28	4	17	48
15	3	16	55	30	19	28	4	17	32
16	6	23	4	■	13	29	1	27	8
17	5	6	9	15	16	37	1	27	■
16	7	40	51	16	33	66	3	28	32
16	0	60	63	■	16	30	1	27	+
17	6	54	66	63	27	50	0	0	5
16	9	34	27	34	62	217	4	17	..
■	9	47	61	26	39	67	1	27	
15	5	18	33	5	50	102	4	17	
■	6	■	29	54	■	152	1	27	

Order of annual merit.	Name.	State.	Date of admission.
29	Pringle, Joel Roberts Poinsett.....	Illinois.....	Sept. 6, 1893
13	Rice, Arthur	Indiana.....	Sept. 7, 1893
42	Ridgely, Randolph.....	Georgia.....	Sept. 8, 1893
†	Rodney, Warren.....	Texas.....	Sept. 9, 1893
48	Russell, John, Henry, jr.....	At large.....	May 12, 1893
10	Sawyer, Frederick Lewis.....	Illinois.....	Sept. 9, 1893
87	Sawyer, Josiah Grigg.....	Illinois.....	May 19, 1893
20	Sheehan, James.....	New York.....	May 21, 1893
49	Stirling, Yates, jr.....	Massachusetts.....	Sept. 9, 1893
29	Stitt, Thomas Lutz.....	Indiana.....	Sept. 5, 1893
24	Stepford, Frederick William.....	Massachusetts.....	May 19, 1893
54	Swigart, Raymond Belt.....	Iowa.....	Sept. 5, 1894
21	Symington, Powers.....	West Virginia.....	Sept. 7, 1894
14	Thompson, Leon Seymour.....	Ohio.....	May 21, 1894
72	Trant Frederick Augustus.....	Connecticut.....	May 19, 1893
28	Wedekind, George.....	New York.....	Sept. 5, 1894
†	Zillman, Christian Charles Herman.....	Missouri.....	Sept. 27, 1894

62 members—Continued.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Conduct.		Months.	Days.	
15	7	45	48	8	34	60	1	27	29
17	8	29	17	16	7	20	1	27	13
16	11	26	31	48	55	123	1	27	42
17	1	32	61	37	30	52	1	27	†
15	6	51	30	49	11	25	2	20	43
17	4	4	25	24	4	14	1	27	10
16	11	55	56	61	3	13	4	17	57
15	8	57	21	18	25	46	4	17	30
16	4	49	19	26	59	163	0	38	40
15	1	13	33	25	11	25	1	27	20
15	7	34	24	10	61	212	4	17	24
17	11	57	50	47	9	23	1	27	54
15	11	20	45	13	37	65	1	27	21
14	0	36	21	11	2	10	4	17	14
16	11	17	5	1	22	42	4	17	*2
16	6	29	33	45	17	36	1	27	36
17	8	23	59	45	20	39	1	27	†

Fourth Class—90 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Andrews, Claude Norton	Iowa	Sept. 5, 1889	15	6		
Asbury, Louis George, jr	Louisiana	Sept. 7, 1889	19	10		
Baehr, William Alfred	Wisconsin	May 20, 1889	15	8	1	27
Bagley, Worth	North Carolina	Sept. 5, 1889	15	5		
Baird, Lewis Conway	Indiana	Sept. 6, 1889	18	2		
Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1889	17	10		
Berry, David Mark	California	Sept. 6, 1889	17	7		
Berrymen, John Russell	Ohio	Oct. 2, 1889	17	3		
Bischoff, Eugene Leo	Kentucky	Oct. 2, 1889	18	1		
Boyd, Romaine Tarver &	Alabama	May 18, 1889	15	6	1	27
Brady, John Richard	Pennsylvania	Sept. 6, 1889	16	11		
Campbell, Edward Hale	Indiana	Sept. 6, 1889	16	11		
Carver, Marvin	Minnesota	Sept. 27, 1889	18	5		
Chadwick, Frank Laird	Minnesota	May 18, 1889	17	2	1	27
Clark, Frank Hodges, jr	Rhode Island	Sept. 5, 1889	17	9		
Cobb, John Addison, jr	Georgia	May 22, 1889	16	3	1	27
Coleman, James Samuel	Alabama	Sept. 5, 1889	16	3		
Cook, Allen Merriam	Kansas	May 22, 1889	18	8	1	27
Crocker, John Archdell	Pennsylvania	May 22, 1889	17	3	1	27
Crosley, Walter Selwyn	Connecticut	Sept. 9, 1889	17	10		
Cruse, Andrew Jackson, jr	Pennsylvania	May 18, 1889	16	4	1	27
Dalley, Harry Logan	Texas	Sept. 7, 1889	18	4		
Doddridge, John Nelson	West Virginia	Sept. 7, 1889	17	1		
Douglas, Richard Spencer	Georgia	June 3, 1889	17	10	1	27
Eberle, Joseph Duvall	Arkansas	May 28, 1889	19	1		
Elder, Edwin Avery	Massachusetts	May 21, 1889	16	9	1	27
Fewel, Christopher Catron	Texas	Oct. 2, 1889	15	11		
Feld, Hubbard Moylan	Virginia	May 20, 1889	16	6	1	27
Fitch, Claude James	Illinois	Sept. 7, 1889	17	6		
French, Robert Abercrombie	Florida	May 23, 1889	16	9	1	27
Gise, William Kern	Illinois	June 14, 1889	18	6	1	27
Greer, George Tate	Virginia	Oct. 4, 1889	17	9		
Groff, Joseph Obients	Missouri	Oct. 3, 1889	19	4		
Groesbeck, William Gerard	Ohio	Sept. 5, 1889	15	6		
Haina, Peter Conner, jr	District of Columbia	May 18, 1889	17	4	1	27
Helalinger, Gerald Long	Kansas	Oct. 2, 1889	19	3		
Hood, Gordon	Alabama	Oct. 2, 1889	18	6		
Hooker, James Clifton	Tennessee	Sept. 7, 1889	16	1		
Jackson, Orton Porter	Pennsylvania	May 18, 1889	15	9	1	27
James, Leland Prierson	South Carolina	Sept. 9, 1889	17	6		
Jenkins, Thomas Leoline	North Carolina	May 21, 1889	19	11	1	27
Johnson, John Randolph	North Carolina	Oct. 4, 1889	19	11		
Johnson, Monton Kinsinger	Ohio	June 10, 1889	19	6		
Jones, Lewis Benson	New York	May 21, 1889	16	6	1	27
Kelling, Thomas Steer	At Large	Oct. 19, 1889	18	2		
Lane, Charles Arthur	Missouri	May 21, 1889	18	3	1	27
Lang, Charles Jonas	Pennsylvania	Sept. 6, 1889	19	10		
Latta, Samuel Granger	Tennessee	Sept. 9, 1889	18	1		
Logan, William Vance	Indiana	June 27, 1889	17	5	1	27
Magill, Louis John	Pennsylvania	Nov. 11, 1889	18	9		
Manton, Walter James	Louisiana	May 21, 1889	16	6	1	27

6 Resigned

Fourth Class—90 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
McKethan, Alfred Augustus ...	North Carolina	Sept. 5, 1889	17	10		
Montgomery, William Slack ...	Kentucky	Sept. 5, 1889	16	11		
Morris, John Ramsey	Missouri	Sept. 7, 1889	19	8		
Neill, Charles Fergus	Texas	May 21, 1889	16	2	1	27
Nutting, Daniel Chaplin, jr.	Kansas	May 21, 1889	19	9	1	27
Olmsted, Percy Napier	Oregon	May 21, 1889	17	10	1	27
Parker, Thomas Drayton	South Carolina	Oct. 3, 1889	18	2		
Pearson, Henry Allen	Utah	Sept. 6, 1889	19	8		
Perkins, Frederick King	California	May 22, 1889	16	6	1	27
Perry, Joseph Albert	Illinois	Sept. 6, 1889	15	10		
Peugnet, Maurice Berthold	Missouri	Sept. 7, 1889	18	7		
Potter, James Boyd	New Jersey	Sept. 5, 1889	16	8		
Powell, William Glasgow	New Jersey	May 18, 1889	17	8		
Powelson, Wilfrid Van Nest	New York	Sept. 6, 1889	17	0		
Pratt, Alfred Allen	Illinois	Sept. 7, 1889	16	2		
Price, Henry Bertrand	Iowa	May 20, 1889	19	11	1	27
Proctor, Andre Morton	Kentucky	Sept. 6, 1889	16	2		
Randolph, William Browne	New York	May 20, 1889	17	9	1	27
Read, Frank De Witt	Ohio	Sept. 6, 1889	19	2		
Richmond, Edgar	California	Sept. 7, 1889	17	9		
Ryan, George Whitehouse	Massachusetts	Sept. 6, 1889	18	3		
Ryan, John Paul Joseph	New York	May 22, 1889	19	9		
Scott, Guy Terrell	Nebraska	Sept. 7, 1889	16	8		
Shaw, Graham	Pennsylvania	Sept. 7, 1889	15	8		
Smith, Edward Price	Michigan	May 29, 1889	17	4		
Stearns, Edward Cheever	Ohio	May 21, 1889	17	8	1	27
Sticht, John Low	New York	Sept. 7, 1889	16	5		
Sturdevant, Richard	Pennsylvania	Sept. 6, 1889	17	7		
Townsend, Arthur Critchlow	Pennsylvania	May 22, 1889	17	0	1	27
Trench, Martin Edward	Minnesota	Oct. 3, 1889	19	10		
Upham, Frank Brooks	Montana	Sept. 6, 1889	17	0		
Vail, Thomas Holdup Stevens	New Mexico	May 25, 1889	18	6		
Valentine, William Stanley	New York	May 20, 1889	16	11	1	27
Ward, Henry Heber	New Jersey	Sept. 7, 1889	18	3		
Wayne, Mullin Harris ^b	Virginia	June 11, 1889	15	9		
Wells, Chester	Pennsylvania	Nov. 15, 1889	19	1		
Whitman, Walter Bloomfield	Texas	May 20, 1889	18	6	1	27
Whittemore, Allan Pendleton	Missouri	Oct. 3, 1889	16	6		
Wilson, Thomas Sheldon	Illinois	May 20, 1889	18	1	1	27
Winship, Emory	Georgia	May 23, 1889	17	3	1	27
Wishart William Clifton	North Carolina	May 30, 1889	17	10	1	27

^b Resigned.

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

November 23, 1889.

	Members.
First class	35
Second class	58
Third class	61
Fourth class	
Total	

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

September 1, 1888, to November 23, 1889.

APPOINTED ENSIGNS.

Naval Cadet George Frederick Hawk	Class of 1888
Naval Cadet Robert Stocker	Class of 1887
Naval Cadet Elliot Snow	Class of 1887
Naval Cadet Benton Clark Decker	Class of 1887
Naval Cadet Mark Lambert Bristol	Class of 1887
Naval Cadet Benjamin Warner Wells, jr.....	Class of 1887
Naval Cadet Walter Safford Burke.....	Class of 1887
Naval Cadet Newton Alexander McCully, jr.....	Class of 1887
Naval Cadet Levi Calvin Bertolette.....	Class of 1887
Naval Cadet William Snelling Cloke.....	Class of 1887
Naval Cadet George Wood Logan.....	Class of 1887
Naval Cadet Edward Moale, jr.....	Class of 1887
Naval Cadet Henry Francis Bryan	Class of 1887
Naval Cadet Samuel Ray Hurlbut.....	Class of 1887
Naval Cadet Andrew Theodore Long	Class of 1887
Naval Cadet Edward Hovey Durell	Class of 1887
Naval Cadet Archibald Henderson Seales.....	Class of 1887
Naval Cadet Ford Hopkins Brown	Class of 1887
Naval Cadet Creighton Churchill	Class of 1887
Naval Cadet Clarence Morton Stone	Class of 1887
Naval Cadet Thomas Washington.....	Class of 1887
Naval Cadet Francis Boughter.....	Class of 1887
Naval Cadet Archibald Hilliard Davis.....	Class of 1887
Naval Cadet Guy Hamilton Burrage.....	Class of 1887
Naval Cadet Frank Mead Russell.....	Class of 1887

APPOINTED ASSISTANT ENGINEERS.

Naval Cadet Frank Warren Hibbs	Class of 1887
Naval Cadet Victor Blue.....	Class of 1887

APPOINTED SECOND LIEUTENANT U. S. MARINE CORPS.

Naval Cadet Herbert Lemuel Draper.....	Class of 1887
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HONORABLY DISCHARGED.

Naval Cadet Frederick Norton Kress	Class of 1887
Naval Cadet Ben Wade Stentis	Class of 1887
Naval Cadet William Graham McMullan	Class of 1887

HONORABLY DISCHARGED—continued.

Naval Cadet Henry Lincoln Peckham.....	Class of 1887
Naval Cadet Charles Ernest Johnston.....	Class of 1887
Naval Cadet Samuel Preston Edmonds.....	Class of 1887
Naval Cadet Henry Asa Allen.....	Class of 1887
Naval Cadet Michael Royston Pigott.....	Class of 1887
Naval Cadet Richard Harrison Jackson.....	Class of 1887
Naval Cadet Frederick Emil Swanstrom.....	Class of 1887
Naval Cadet Claude Stanley Cochran.....	Class of 1887
Naval Cadet Charles Edward Hudson.....	Class of 1887
Naval Cadet James Grey Ballinger.....	Class of 1887
Naval Cadet Colin Samuel Craig.....	Class of 1887
Naval Cadet Thomas Michael O'Halloran.....	Class of 1887
Naval Cadet William Branch Moseley.....	Class of 1887

RESIGNED.

Naval Cadet Curtis Dwight Wilbur, class of 1888.....	Sept. 1, 1888
Naval Cadet Samuel James Aiken, class of 1888.....	Sept. 1, 1888
Naval Cadet Louis Joseph Anderson, class of 1888.....	Sept. 1, 1888
Naval Cadet Stuart Warren Cramer, class of 1888.....	Sept. 1, 1888
Naval Cadet Moses Daniel Monroe, class of 1888.....	Sept. 1, 1888
Naval Cadet Louis le Sassier Young, class of 1887.....	Sept. 20, 1888
Naval Cadet Wiley Sims Embrey, third class.....	Oct. 9, 1888
Naval Cadet Walter Smith Norton, third class.....	Oct. 13, 1888
Naval Cadet George Fort Gibbs, third class.....	Oct. 17, 1888
Naval Cadet Robert Sayers, fourth class.....	Oct. 17, 1888
Naval Cadet James Jefferson Garth, fourth class.....	Dec. 17, 1888
Naval Cadet Frederick William Ballschmider, second class.....	Feb. 25, 1889
Naval Cadet John Paul Joseph Ryan, second class.....	Feb. 25, 1889
Naval Cadet Charles Follett Consaul, third class.....	Feb. 25, 1889
Naval Cadet Timothy Francis Maurin, third class.....	Mar. 1, 1889
Naval Cadet Peter Stuyvesant Pillot, third class.....	Mar. 1, 1889
Naval Cadet William Browne Randolph, fourth class.....	Mar. 30, 1889
Naval Cadet William Stanley Valentine.....	Apr. 29, 1889
Naval Cadet William Glasgow Powell, fourth class.....	May 6, 1889
Naval Cadet Thomas Holdup Stevens Vail, fourth class.....	May 13, 1889
Naval Cadet Percy Napier Olmsted, fourth class.....	May 14, 1889
Naval Cadet Graham Shaw, fourth class.....	May 14, 1889
Naval Cadet Thomas Leoline Jenkins, third class.....	May 15, 1889
Naval Cadet Lewis Conway Baird, fourth class.....	May 15, 1889
Naval Cadet Richard Spencer Douglas, fourth class.....	May 15, 1889
Naval Cadet William Lewis Murray, fourth class.....	May 15, 1889
Naval Cadet Charles Louis Kaufman, fourth class.....	May 16, 1889
Naval Cadet Guy Terrel Scott, fourth class.....	May 16, 1889
Naval Cadet George Peter Wager, fourth class.....	May 16, 1889
Naval Cadet Hugh Waldron, fourth class.....	May 16, 1889
Naval Cadet Albert Perrin Childs, fourth class.....	May 17, 1889
Naval Cadet Lucius Boltwood, fourth class.....	May 18, 1889
Naval Cadet James Samuel Coleman, fourth class.....	May 18, 1889
Naval Cadet Walter Portrum Bewley, fourth class.....	May 21, 1889
Naval Cadet William Wiley Sparks, fourth class.....	May 21, 1889
Naval Cadet James Clifton Hooker, fourth class.....	May 21, 1889
Naval Cadet Joseph Jennings, fourth class.....	May 21, 1889
Naval Cadet John Haynes Thompson, fourth class.....	May 21, 1889

Naval Cadet Frederick Augustus Churchill, fourth class	May 25, 1889
Naval Cadet Edwin Huntington McDonald, second class	June 24, 1889
Naval Cadet Rollin Roy Nevitt, fourth class	June 24, 1889
Naval Cadet William Vance Logan, fourth class	June 24, 1889
Naval Cadet Ernest Bentley Anderson, class of 1889	June 26, 1889
Naval Cadet Edward Gaston Russell, second class	Sept. 27, 1889
Naval Cadet Sullivan Thomas Sparkman, third class	Oct. 4, 1889
Naval Cadet Bernard Holt Camden, third class	Oct. 8, 1889
Naval Cadet Mullin Harris Wayne, fourth class	Oct. 8, 1889
Naval Cadet Louis John Magill, third class	Oct. 12, 1889
Naval Cadet Chester Wells, third class	Oct. 12, 1889
Naval Cadet Thomas Steele Kellogg, third class	Oct. 12, 1889
Naval Cadet William James Reese, third class	Oct. 14, 1889
Naval Cadet Romaine Tarver Boyd, fourth class	Nov. 21, 1889

DROPPED.

Naval Cadet Louis Labadie Driggs, second class	Jan. 22, 1889
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DISMISSED.

Naval Cadet Henry Lake Woodward, first class	Feb. 25, 1889
Naval Cadet Herbert Ellsworth McReavy, third class	Oct. 29, 1889

DIED.

Naval Cadet John Young Lang, fourth class	May 15, 1889
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MERIT-ROLLS FOR 1888--'89.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 70, showing the relative weight of the different branches, are used as co-efficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for conduct, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls." (Regulations U. S. Naval Academy, § 191.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

P denotes physically disqualified for the naval service.

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

a denotes absence from examination.

Merit-roll of the graduating class of naval cadets at the conclusion of the six years' course, June, 1883.

MERIT-ROLL—GRADUATING CLASS.

NAME.	NAVAL INSTRUCTION.					ORDNANCE AND ARTILLERY.		NAVIGATION.		STEAM-ENGINEERING.		MODERN LANGUAGES.		CRUISE REPORTS.		AGGREGATE FOR FINAL EXAMINATION.		AGGREGATE FOR FOUR YEARS.		FINAL AGGREGATE.		ASSIGNMENT.
	Geographical and Naval Instruction.	Ordnance and Artillery.	Navigation.	Steam-engineering.	Modern Languages.	Cruise reports.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.													
Maxims	56	44	44	44	24	24	240	760	1000													
1 Stocker, Robert	45.36	34.94	33.28	30.26	23.77	22.20	203.80	640.68	884.48	Ensign.												
2 Hibbs, Frank Warren	44.07	39.38	36.96	40.48	24.43	22.96	212.26	667.18	879.43	Assistant engineer.												
3 Snow, Elliot	46.06	40.04	40.04	29.26	24.71	22.62	202.73	653.54	856.27	Ensign.												
4 Decker, Benton Clark	46.20	41.26	34.17	35.31	24.08	22.24	207.39	636.62	844.07	Ensign.												
5 Bristol, Mark Lambert	47.46	36.08	33.44	34.21	21.63	19.56	192.36	634.12	838.50	Ensign.												
6 Wells, Benjamin Warner, Jr	41.72	39.82	37.40	31.35	24.78	22.44	197.51	618.28	815.79	Ensign.												
7 Burke, Walter Harford	45.36	37.73	35.42	35.20	21.49	20.40	195.60	610.41	806.01	Ensign.												
8 McCall, Newton Alexander, Jr	39.63	37.18	35.97	31.90	23.38	19.74	187.79	616.48	804.27	Ensign.												
9 Bertolotto, Levi Calvin	44.24	36.65	34.16	30.69	22.72	21.24	194.91	601.76	786.67	Ensign.												
10 Clarke, William Snelling	37.10	32.07	29.48	30.25	22.08	17.28	169.46	608.15	778.61	Ensign.												
11 Logan, George Wood	44.10	37.84	36.64	29.81	26.04	22.74	196.17	578.47	774.64	Ensign.												
12 Mosale, Edward, Jr	41.44	35.31	35.86	26.63	22.02	20.46	181.73	592.40	774.53	Ensign.												
13 Stearns, Ben Wade	36.83	35.86	35.97	16.50	20.56	20.34	164.07	602.73	769.80	Honorably discharged.												
14 Bryan, Henry Francis	43.54	39.92	32.12	27.60	24.71	19.74	177.53	589.39	766.92	Ensign.												
15 Hurst, Samuel Ray	37.24	34.21	28.16	27.61	24.15	19.68	170.45	598.26	766.83	Ensign.												
16 Long, Andrew Threlkott	42.56	33.77	32.67	30.80	24.64	21.78	186.22	577.62	763.84	Ensign.												
17 Donnell, Edward Hovey	41.16	31.99	33.09	32.45	23.24	21.18	182.93	579.64	762.57	Ensign.												
18 Seales, Archibald Henderson	44.10	36.96	35.97	33.09	22.19	20.70	196.01	565.99	761.00	Ensign.												
19 Brown, Ford Hopkins	39.34	34.83	33.23	29.14	20.58	20.34	182.56	575.43	757.98	Ensign.												
20 McMillan, William Graham	40.04	24.10	28.05	27.61	22.68	18.84	171.32	568.66	751.98	Honorably discharged.												
21 Churchill, Creighton	43.96	35.64	30.16	29.92	24.43	20.63	184.61	560.42	745.03	Ensign.												
22 Stump, Clarence Morton	43.84	31.46	31.64	29.92	21.94	19.44	177.32	562.65	739.97	Ensign.												
23 Peckham, Henry Lincoln	42.56	36.84	34.21	27.72	19.74	18.13	160.19	569.62	728.81	Honorably discharged.												

24	Washington, Thomas.....	37.66	32.34	30.03	27.50	22.54	21.48	171.55	566.99	738.54	Ensign.
25	Boughter, Francis	43.96	36.30	31.13	29.37	26.18	20.52	187.46	542.81	730.27	Ensign.
26	Davis, Archibald Hilliard	42.56	32.89	29.26	28.38	21.14	19.32	173.55	550.63	724.18	Ensign.
27	Burrage, Guy Hamilton	40.60	34.32	30.36	34.43	21.28	20.40	181.39	541.41	722.80	Ensign.
28	Blue, Victor	39.20	29.15	28.70	27.50	24.50	19.32	169.37	542.37	711.74	Assistant engineer.
29	Draper, Herbert Lemuel	38.36	29.81	26.40	28.93	22.96	18.48	164.94	543.05	707.99	Second Lieutenant, marine corps.
30	Johnston, Charles Ernest	35.70	28.93	27.94	21.78	28.07	19.02	161.44	544.86	706.30	Honorably discharged.
31	Russell, Frank Meade	42.14	31.63	22.33	32.01	18.34	18.72	165.23	540.02	705.24	Ensign.
P 32	Edmonds, Samuel Preston	38.36	28.38	28.27	24.64	23.66	19.44	162.75	541.68	704.43	Honorably discharged.
33	Allen, Henry Asa	40.46	35.86	31.13	34.54	15.05	19.74	176.78	527.21	703.99	Honorably discharged.
P 34	Pigott, Michael Royston	35.00	27.61	28.27	25.96	24.85	17.88	159.57	542.07	701.64	Honorably discharged.
35	Jackson, Richard Harrison	37.66	30.58	29.26	29.81	23.45	20.94	171.70	527.07	698.77	Honorably discharged.
36	Swanstrom, Frederick Emil	40.04	29.26	30.14	28.93	20.09	19.74	168.20	526.96	695.16	Honorably discharged.
37	Cochran, Claude Stanley	39.34	30.69	30.80	23.98	19.39	19.80	164.00	523.25	687.25	Honorably discharged.
38	Hudson, Charles Edward	37.52	30.14	27.83	25.74	19.81	20.94	161.98	506.52	688.50	Honorably discharged.
39	Ballinger, James Guy	35.00	25.08	24.97	24.75	20.65	18.60	149.05	517.35	686.40	Honorably discharged.
40	Craig, Colin Samuel	36.54	27.61	25.30	22.11	17.64	19.32	148.52	510.36	658.88	Honorably discharged.
P 41	O'Halloran, Thomas Michael	39.20	30.14	28.71	24.64	21.84	19.32	153.85	488.19	652.04	Honorably discharged.
42	Moseley, William Branch	36.96	24.64	31.12	23.21	17.15	18.12	141.20	502.04	643.24	Honorably discharged.

Merit-roll of the naval cadets of the class appointed in 1884.—Annual examination, June, 1888.

Name.	Autonomy, navy, rating and entry.		Least squares and strength of materials.		Ordnance and gunnery.		Steamship, ship building, and naval tactics.		Practical seamanship.		Practical instruction in steam-engineering.		Physiology and hygiene.		Conduct.		Average rate for fourth year.		Average rate for third year.		Average rate for second year.		Average rate for first year.		General average rate for four years.			
	76	20	76	20	76	20	72	20	76	20	76	20	12	20	204	224	204	152	76	160	76	160	76	160	76	160		
Maximo																												
1 William N. Vaneau.....	60.16	19.15	72.15	17.95	65.80	17.95	65.80	17.95	65.80	17.95	65.80	17.95	11.16	17.07	279.72	212.60	279.72	139.29	65.28	606.96	65.28	139.29	65.28	606.96	65.28	139.29	65.28	606.96
2 Frank Marble.....	63.65	18.30	67.83	17.95	64.72	17.95	64.72	17.95	64.72	17.95	64.72	17.95	9.90	16.07	264.88	204.71	264.88	141.03	69.95	670.27	69.95	141.03	69.95	670.27	69.95	141.03	69.95	670.27
3 Curtis D. Wilbur	59.68	16.90	66.56	17.10	57.06	17.10	57.06	17.10	57.06	17.10	57.06	17.10	9.72	19.33	251.76	199.23	251.76	124.70	61.27	636.96	61.27	124.70	61.27	636.96	61.27	124.70	61.27	636.96
4 Ashley H. Robertson	59.66	16.13	63.04	16.70	59.40	16.70	59.40	16.70	59.40	16.70	59.40	16.70	8.91	13.07	242.99	189.12	242.99	129.48	61.33	622.92	61.33	129.48	61.33	622.92	61.33	129.48	61.33	622.92
5 Carlo H. Brittain.....	54.90	16.56	65.17	17.00	59.94	17.00	59.94	17.00	59.94	17.00	59.94	17.00	9.08	20.00	253.90	175.85	253.90	118.97	60.96	609.38	60.96	118.97	60.96	609.38	60.96	118.97	60.96	609.38
6 Casey B. Morgan	57.34	16.05	63.65	16.25	58.86	16.25	58.86	16.25	58.86	16.25	58.86	16.25	9.60	10.80	238.75	183.07	238.75	124.28	62.84	604.89	62.84	124.28	62.84	604.89	62.84	124.28	62.84	604.89
7 William M. Green.....	54.24	12.85	64.71	17.05	55.62	17.05	55.62	17.05	55.62	17.05	55.62	17.05	8.91	15.73	231.99	170.90	231.99	126.85	62.89	592.39	62.89	126.85	62.89	592.39	62.89	126.85	62.89	592.39
8 Marcus L. Miller	54.34	13.90	64.24	14.65	52.56	14.65	52.56	14.65	52.56	14.65	52.56	14.65	7.95	16.40	222.08	175.29	222.08	120.89	66.62	590.58	66.62	120.89	66.62	590.58	66.62	120.89	66.62	590.58
9 George N. Hayward	52.39	14.66	61.75	16.85	57.06	16.85	57.06	16.85	57.06	16.85	57.06	16.85	9.51	2.40	220.69	175.83	220.69	127.68	65.69	549.49	65.69	127.68	65.69	549.49	65.69	127.68	65.69	549.49
10 Chas. W. Kemmer	54.24	13.75	60.61	16.40	57.60	16.40	57.60	16.40	57.60	16.40	57.60	16.40	7.86	18.27	239.31	171.57	239.31	116.97	61.23	549.10	61.23	116.97	61.23	549.10	61.23	116.97	61.23	549.10
11 Edw. W. Hewick.....	54.72	15.25	54.06	15.50	54.54	15.50	54.54	15.50	54.54	15.50	54.54	15.50	8.13	19.33	229.64	169.71	229.64	123.14	63.97	586.46	63.97	123.14	63.97	586.46	63.97	123.14	63.97	586.46
12 John F. Hubbard	55.67	15.39	59.09	16.80	56.04	16.80	56.04	16.80	56.04	16.80	56.04	16.80	10.56	11.07	229.15	164.06	229.15	126.87	65.25	545.33	65.25	126.87	65.25	545.33	65.25	126.87	65.25	545.33
13 John A. Lejeune	56.67	15.45	59.09	14.40	53.64	14.40	53.64	14.40	53.64	14.40	53.64	14.40	9.42	14.67	228.62	168.52	228.62	120.54	66.17	547.86	66.17	120.54	66.17	547.86	66.17	120.54	66.17	547.86
14 Samuel N. Robinson	55.19	16.20	59.86	16.85	52.02	16.85	52.02	16.85	52.02	16.85	52.02	16.85	8.55	17.00	232.77	172.18	232.77	119.17	57.92	592.04	57.92	119.17	57.92	592.04	57.92	119.17	57.92	592.04
15 Edw. H. Chambliss	55.48	13.70	61.56	17.60	63.76	17.60	63.76	17.60	63.76	17.60	63.76	17.60	10.92	19.20	244.54	166.24	244.54	109.80	55.97	580.56	55.97	109.80	55.97	580.56	55.97	109.80	55.97	580.56
16 Armin Harrath.....	54.81	16.75	61.75	15.50	54.30	15.50	54.30	15.50	54.30	15.50	54.30	15.50	9.99	0.93	222.05	169.06	222.05	122.18	66.07	577.36	66.07	122.18	66.07	577.36	66.07	122.18	66.07	577.36
17 Lawrence L. A. Ingate	55.29	15.00	61.37	15.96	63.64	15.96	63.64	15.96	63.64	15.96	63.64	15.96	8.55	19.07	234.79	157.40	234.79	120.46	62.44	575.09	62.44	120.46	62.44	575.09	62.44	120.46	62.44	575.09
18 Henry K. Benham.....	53.39	15.40	67.00	14.96	59.23	14.96	59.23	14.96	59.23	14.96	59.23	14.96	8.67	16.13	231.72	172.14	231.72	118.40	61.15	573.41	61.15	118.40	61.15	573.41	61.15	118.40	61.15	573.41
19 Ernest E. West	53.86	15.80	56.67	15.00	60.22	15.00	60.22	15.00	60.22	15.00	60.22	15.00	8.40	15.00	220.33	173.42	220.33	117.78	55.04	606.57	55.04	117.78	55.04	606.57	55.04	117.78	55.04	606.57
20 Charles F. Hughes	54.91	12.65	60.04	17.05	56.80	17.05	56.80	17.05	56.80	17.05	56.80	17.05	9.03	18.93	235.77	165.04	235.77	112.37	52.76	565.94	52.76	112.37	52.76	565.94	52.76	112.37	52.76	565.94
21 Albert L. Norton	51.49	14.90	54.34	15.65	52.20	15.65	52.20	15.65	52.20	15.65	52.20	15.65	9.84	17.87	227.45	162.93	227.45	116.62	59.87	560.87	59.87	116.62	59.87	560.87	59.87	116.62	59.87	560.87
22 Leroy A. Stafford	61.94	16.96	62.65	15.66	49.14	15.66	49.14	15.66	49.14	15.66	49.14	15.66	8.10	12.07	234.54	161.87	234.54	106.71	57.31	559.83	57.31	106.71	57.31	559.83	57.31	106.71	57.31	559.83
27 Manuel J. Allen.....	54.24	14.85	58.43	16.00	51.44	16.00	51.44	16.00	51.44	16.00	51.44	16.00	7.98	19.33	228.67	160.52	228.67	111.04	55.15	555.36	55.15	111.04	55.15	555.36	55.15	111.04	55.15	555.36

24	Eli K. Cole	54.72	13.80	56.43	50.94	15.60	5.96	8.34	16.13	221.92	153.96	113.89	57.14	546.91
r25	Louis J. Anderson	50.73	12.10	54.34	49.14	14.75	6.44	7.77	6.80	203.07	159.99	117.53	59.34	539.93
26	William B Franklin	51.11	14.65	53.96	50.22	15.70	5.76	7.98	12.27	211.65	158.70	107.60	56.08	534.03
27	James H. Reid	49.78	13.80	54.72	46.62	14.65	5.52	7.65	16.27	209.01	163.64	105.26	55.33	533.24
r28	Stuart W. Cramer	51.49	14.10	54.53	45.90	16.00	5.76	8.13	16.00	210.91	155.62	111.09	55.17	532.79
29	Herman O. Stickney	51.30	13.05	51.30	48.42	14.90	6.44	8.01	18.00	211.42	152.85	112.01	55.72	532.00
30	Edward L. Beach	50.25	14.75	51.49	46.98	14.35	5.92	7.95	14.40	206.19	156.10	105.53	57.21	525.03
31	Frederick B. Bassett, jr.	51.11	13.65	50.54	45.18	15.30	5.60	8.25	12.27	201.80	147.67	113.63	56.08	519.28
32	Herbert G. Gates	49.21	13.15	54.15	50.40	15.05	5.76	8.31	8.13	204.16	154.79	102.32	56.37	517.64
r33	Moses D. Monroe	51.11	12.95	50.53	47.70	14.15	5.96	7.92	7.47	197.61	143.34	108.24	61.56	510.75
34	Henry A. Wiley	49.21	14.10	49.97	46.98	15.65	5.92	7.83	15.47	205.13	153.07	100.53	51.29	510.02
35	Theodore P. Kane	51.11	14.10	54.72	53.10	16.00	6.04	7.77	7.73	210.57	149.21	97.94	51.39	509.11

* Completed four years' course "with distinction."

b Completed four years' course "with credit."

r Resigned.

Merit-roll of the naval cadets of the first class.—Annual examination, June, 1882.

NAME	Seamanship, ship building, and naval architect ure		Seamanship, prac tice-cruises.		Ordnance and gunnery.		Astronomy, navi- gation, and sur- veying.		Navigation, prac- tice-cruises.		Practical instruc- tion in steam-en- gineering.		Least squares and strength of ma- terials.		Physical measure- ments.		Physiology and hygiene.		Conduct.		A g g r e g a t e for fourth year.		A g g r e g a t e for third year.		A g g r e g a t e for second year.		A g g r e g a t e for first year.		General average for four years.	
	64	20	73	52	12	4	20	20	12	20	12	20	20	20	20	20	20	20	20	20	204	224	152	76	160					
Maxima																														
1	Richmond P. Hobson	62.56	17.85	66.42	44.96	10.53	6.60	18.05	18.05	10.56	18.80	274.40	194.28	134.76	68.26	673.68														
2	George H. Koch	60.52	17.75	64.24	46.28	10.56	7.00	17.85	18.15	9.15	19.07	272.57	192.76	137.68	68.45	671.41														
3	Arthur B. Hoff	58.31	17.40	62.28	43.08	10.65	5.70	17.45	17.25	10.32	19.30	261.99	187.64	136.07	72.05	660.75														
4	Nathan C. Twining	56.61	16.85	63.90	41.86	9.90	6.50	16.15	16.10	9.75	16.53	254.24	186.89	133.18	68.15	642.46														
5	Heraman F. Hutchinson	53.38	16.65	59.23	44.97	10.53	6.60	16.55	16.85	10.17	16.67	252.69	173.67	132.68	68.88	639.92														
6	William V. Pratt	54.74	17.06	61.56	40.95	10.98	6.10	15.06	15.75	9.63	14.80	246.61	173.43	134.97	67.11	612.12														
7	Samner E. Kittelle	55.25	17.59	56.34	37.83	9.36	6.50	13.50	16.15	10.71	16.67	243.01	173.67	125.20	62.01	603.29														
8	George R. Marvel	49.47	16.60	55.44	39.78	9.84	6.10	15.66	12.90	8.67	18.93	233.78	170.13	126.71	63.11	592.78														
9	Louis M. C. Nulsen	44.79	15.80	56.70	37.31	9.63	6.50	16.15	14.60	7.98	17.47	230.93	181.71	122.80	62.91	593.35														
10	Lewis C. Lucas	56.61	15.85	59.76	37.96	8.76	6.50	13.85	13.80	8.87	17.33	239.09	166.84	130.60	68.28	587.60														
11	John H. Patton	48.45	16.35	58.14	36.52	9.36	6.00	12.40	12.50	7.62	16.13	227.47	170.31	112.40	56.51	565.69														
12	Hertram A. Neumann	51.17	17.00	53.82	34.32	9.39	6.00	12.60	13.75	8.25	18.67	221.97	169.32	116.85	54.61	565.75														
13	Charles C. Long	60.07	14.70	53.28	35.88	9.09	6.20	14.55	14.95	8.13	16.27	219.12	158.21	123.87	63.73	561.98														
14	William D. MacDougall	54.55	15.15	52.74	33.67	8.31	6.50	13.65	13.70	8.91	14.00	220.18	166.51	118.99	59.00	564.68														
15	George W. Banforth	47.94	14.95	51.30	34.71	7.80	6.40	12.90	11.45	8.01	16.13	214.59	176.84	120.65	58.05	559.58														
16	Thomas P. Magruder	49.41	15.75	54.68	42.51	8.64	5.10	13.90	14.55	8.10	13.87	200.91	152.46	112.69	59.05	555.51														
17	Edward R. Lawrence	47.77	15.20	53.46	35.75	8.46	6.00	15.20	14.60	7.92	11.00	216.08	166.83	114.83	58.95	554.67														
18	Louis E. de Stiguer	64.41	14.05	52.28	37.44	9.13	5.90	15.55	14.45	8.10	16.60	219.90	163.04	109.71	56.56	549.20														
19	George B. Bradshaw	47.94	13.60	54.59	37.70	8.19	5.90	15.00	14.20	7.86	7.33	216.12	166.88	108.91	57.27	548.18														
20	William W. Phillips	51.34	15.50	56.70	38.48	8.76	5.80	13.75	13.35	8.56	14.13	238.36	154.36	104.90	54.61	543.23														
21	Louis A. Kaser	64.54	13.40	54.72	36.10	8.79	6.00	14.05	12.00	8.19	6.93	207.72	165.67	112.83	58.08	542.15														
22	Clarence N. Coffey	48.92	13.90	50.40	35.23	8.01	6.50	12.25	13.75	7.95	16.27	211.18	157.51	115.80	57.68	541.87														
23	William C. Cole	47.56	16.10	69.40	34.48	8.64	6.40	12.60	16.00	8.76	12.00	211.72	157.20	113.20	59.41	541.59														

24	George G. Mitchell.....	46.07	14.65	55.08	37.18	9.42	6.10	13.00	14.70	8.01	18.80	223.01	156.11	109.21	52.24	540.57
25	Ben H. Fuller.....	47.94	13.65	58.50	40.56	9.93	5.80	16.00	14.35	8.22	8.67	223.62	151.21	109.73	55.70	540.25
26	Charles A. Brand.....	48.28	15.90	53.28	35.36	9.75	5.80	14.70	13.95	8.73	12.80	218.55	150.71	107.73	62.77	539.76
27	Philip Williams	49.30	12.75	53.46	34.97	8.52	6.20	13.30	12.85	8.16	12.13	211.64	159.85	106.42	57.47	535.88
28	Robert E. Carney.....	51.34	17.15	51.84	35.49	8.25	6.10	11.40	13.85	8.43	14.53	218.38	151.90	104.02	55.47	529.77
29	Warren J. Terhune....	44.88	14.15	49.86	33.93	7.74	5.80	13.30	13.05	8.67	7.20	198.58	156.82	111.81	59.98	527.19
30	Robert McM. Dutton.....	44.20	14.45	50.94	32.11	8.37	5.60	12.65	13.00	8.70	12.67	202.69	143.92	107.65	54.29	513.55
31	William K. Harrison.....	43.35	14.30	48.78	34.58	8.49	5.80	13.35	13.80	7.98	15.47	205.40	150.68	101.71	52.70	510.49
32	George W. Kirk	43.84	14.45	46.26	33.28	8.13	5.60	12.80	13.05	7.50	12.40	197.31	146.82	108.87	54.23	507.23
33	Julius Prochazka.....	43.69	15.95	45.00	34.84	8.94	6.50	12.90	12.90	7.89	17.87	206.48	147.21	98.08	51.74	503.51
r34	Ernest B. Anderson.....	43.35	13.20	45.00	33.67	8.73	5.90	12.55	11.85	8.22	16.27	198.74	146.39	97.76	50.91	493.80
35	George L. Fermier.....	47.26	17.20	45.90	32.89	9.09	6.90	12.50	13.35	0.00	0.00	185.09	148.94	106.73	51.33	492.19

" Completed four years' course "with distinction," b Completed four years' course "with credit." r Resigned.

Merit-roll of naval cadets, second class, 40 members, annual examination, June, 1889.

Order of annual merit.	NAME.	Astronomy, navigation, and surveying.	Steam-machinery, marine engines, and boilers.	Practical work in steam-engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Conduct.	Aggregate.
		Maxima	12	48	12	60	48	30	16	12	272
1	Thomas F. Kuhn	9.69	41.64	10.05	52.35	42.36	17.75	13.52	9.00	196.36
2	Lawrence Spear	9.90	39.44	9.87	51.60	41.88	17.75	13.32	9.00	192.80
3	Noah T. Coleman	9.00	39.84	9.87	49.50	40.32	16.70	14.01	6.42	198.59
4	Frank A. Schofield	10.08	39.84	10.22	41.55	41.70	17.50	13.76	9.84	184.65
5	Urban T. Holmes	9.03	38.16	10.17	49.40	36.84	15.60	13.80	7.68	181.08
6	John V. Chase	9.24	38.24	10.24	47.10	37.92	16.85	13.60	7.56	180.78
7	Alonso Gartley	8.54	34.88	10.14	50.70	34.56	13.70	14.92	5.88	177.70
8	Cleland Davis	8.65	35.52	9.99	43.40	37.20	17.00	14.40	7.08	178.54
9	Henry G. Ziegemeier	9.06	33.48	10.14	41.40	36.72	17.20	12.80	10.44	171.24
10	Matt. H. Signor	9.18	33.24	9.03	50.10	37.80	17.35	12.32	0.60	169.62
11	Montgomery M. Taylor	8.37	36.24	10.32	40.05	34.32	17.25	14.16	5.46	169.17
12	Claude H. Price	8.24	34.04	9.57	38.10	33.72	15.85	12.52	9.96	166.04
13	Frank B. Sullivan	8.82	35.52	9.27	42.45	35.76	14.45	13.12	6.24	165.61
14	John M. Blankenship	8.10	34.64	10.08	37.80	33.12	14.65	14.88	10.36	162.57
15	Lawrence H. Moses	8.55	33.72	8.55	43.20	36.00	18.25	10.64	4.38	163.79
16	George W. Williams	9.00	34.04	9.36	41.40	34.92	15.95	12.08	5.16	161.95
17	Charles O. Bond	8.46	37.52	10.17	29.90	34.20	14.45	12.84	8.62	161.06
18	William H. Buck	8.19	32.04	10.04	37.80	34.44	15.65	12.44	9.90	160.54
19	Albertus W. Catlin	8.94	31.56	10.32	40.05	33.72	14.45	12.60	7.08	159.31
20	Claude Bailey	7.80	33.24	9.87	40.95	31.44	15.25	12.16	8.24	158.99
21	Cyrus L. Radford	7.68	33.36	9.87	39.00	31.92	12.05	13.72	10.20	158.80
22	Henry S. Ritter	7.71	31.56	9.63	38.70	31.32	14.45	12.64	12.00	158.01
23	Thomas C. Treadwell	8.56	32.64	9.21	34.10	34.08	15.10	11.64	7.92	157.27
24	William A. Snow	7.11	30.00	10.14	40.05	30.84	14.70	14.04	10.36	157.26
25	Wendell C. Neville	7.50	31.80	9.40	37.65	31.84	15.30	13.04	10.20	156.49
26	Lev H. Everhart	7.92	34.44	9.60	37.80	31.32	12.55	13.76	8.34	155.71
27	Julius L. Latimer	8.40	33.00	9.74	38.70	32.04	14.65	10.76	7.92	155.25
28	Lucius C. Bootwick	8.01	35.16	9.44	37.20	33.60	12.94	13.04	4.08	154.83
29	John H. Dayton	8.44	32.52	9.72	39.15	33.00	14.55	10.96	4.04	152.88
30	William A. Moffett	7.35	30.24	10.32	36.90	29.24	14.05	12.56	10.56	152.76
31	Doctor F. Dismukes	8.01	30.36	9.81	38.55	31.92	13.35	12.00	7.62	151.82
32	Charles H. McVay	7.41	31.32	9.99	36.30	30.84	16.95	13.04	11.10	150.85
33	Charles T. Vogelzang	7.95	31.44	10.36	26.10	33.48	17.45	12.52	10.14	150.41
34	Erwin H. McDonald	7.05	34.56	9.78	36.00	32.16	15.65	12.34	4.32	151.76
35	Franklin S. Rising	7.68	30.36	9.93	36.00	31.32	14.70	13.72	6.74	151.49
36	John R. Edie	6.00	24.56	9.78	38.10	24.80	17.10	13.44	7.50	149.54
37	Frederick L. Eaton								9.24	
38	Frank H. Kochersperger								11.62	
39	Eugene D. Ryan								9.72	
40	William T. Saunders								6.00	

a Sick turned back to next lower class.

Merit-roll of naval cadets, third class, 61 members, annual examination, June, 1889.

Ord	NAME	Trigonometry, analytical geometry, and descrip- tive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and Ger- man.	Mechanical drawing.	Conduct.	Aggregate.
		48	24	24	24	24	8	152
	Maxima	48	24	24	24	24	8	152
*1	Frank B. Zahm	47.88	21.60	22.50	22.44	23.04	7.36	144.82
*2	Horatio G. Gillmor	48.12	21.48	22.62	21.78	21.54	7.01	142.55
*3	Richard M. Watt	45.48	19.74	20.52	20.76	21.24	7.62	135.36
*4	Henry G. Smith	45.12	20.40	20.40	21.60	20.52	7.20	135.24
*5	Reginald R. Belknap	40.32	19.56	21.72	22.74	22.44	6.75	133.53
*6	Daniel B. Nide	41.16	18.60	21.72	21.66	23.88	6.02	133.04
*7	John H. Rowen	46.68	19.50	17.64	16.86	24.84	5.15	130.67
*8	De Witt Blamer	46.20	19.56	19.86	19.02	20.10	5.31	130.05
*9	Clark D. Stearns	38.64	19.32	21.12	21.60	21.84	7.26	129.78
*10	Edwin T. Pollock	40.20	19.26	21.24	21.84	19.98	7.10	129.62
11	Henry C. Kuenzli	39.00	18.18	21.78	21.90	21.36	5.76	127.98
12	Harley H. Christy	40.32	18.42	20.58	19.02	20.58	7.36	126.28
13	Lucien G. Smith	36.72	19.02	21.84	20.58	20.22	7.07	125.45
14	Henry H. Hough	33.84	16.56	19.98	24.48	22.50	7.26	124.62
15	Albert S. McLemore	35.52	19.32	21.12	23.70	19.98	4.54	124.18
16	Milton E. Reed	34.80	18.84	20.52	19.32	23.04	7.58	124.10
17	Arthur L. Willard	34.08	20.70	22.44	21.24	18.00	6.98	123.44
18	John G. F. Moale	33.00	17.70	19.26	21.30	24.18	6.78	122.23
19	Charles F. Preston	38.52	18.12	17.94	18.96	20.76	7.17	121.47
20	Renwick J. Hartung	37.08	18.36	19.32	17.94	20.16	6.98	119.84
21	Noble E. Irwin	39.96	17.82	17.76	16.92	20.88	5.41	118.75
22	Waldo Evans	36.48	18.84	18.30	18.06	20.10	6.46	118.24
23	Charles R. Emrich	36.24	19.20	19.26	18.78	20.46	3.71	117.65
24	William H. McGrann	34.56	16.74	20.88	19.68	19.26	5.47	116.59
25	Bion B. Bierer	34.08	18.60	19.08	17.70	19.02	6.56	115.04
26	Robert L. Flowers	35.04	17.34	18.60	18.72	18.12	6.40	114.22
27	Richard H. Leigh	35.88	16.68	17.88	16.74	19.08	7.23	113.49
28	Jay H. Sypher	32.28	17.94	19.86	18.18	18.96	5.25	112.47
29	William D. Brotherton	33.60	16.14	18.66	17.88	19.92	5.54	111.74.
30	Irving Blount	33.60	16.62	18.18	18.30	17.76	7.20	111.66
31	Archibald Anthon	31.20	16.86	17.70	21.30	21.24	3.04	111.34
32	James F. Carter	31.56	16.74	20.16	17.88	17.76	6.37	110.47
33	Adelbert Althouse	32.64	16.14	17.22	17.10	20.28	6.88	110.26
34	Harry H. Caldwell	31.08	17.40	18.66	19.14	18.36	5.57	110.21
35	George H. Shepard	31.32	18.30	20.04	20.10	17.76	2.50	110.02
36	Rufus H. Lane	31.80	18.90	18.48	17.34	18.72	4.77	110.01
37	Dion Williams	30.60	17.22	19.98	17.64	20.76	3.71	109.91
38	William H. Ford	30.48	15.66	17.34	18.90	19.68	6.85	108.91
39	William M. McKelvy	30.96	15.72	18.66	18.00	18.42	6.56	108.32
40	Harry E. Smith	32.40	16.50	16.44	15.90	21.54	5.38	108.16
41	Thomas J. Senn	35.04	15.96	19.14	16.68	15.84	5.18	107.84
42	Edward Trickle	30.96	15.18	17.34	17.58	19.86	6.82	107.74
43	George Richards	32.40	17.94	15.96	16.32	20.52	3.07	106.01
44	John T. Myers	30.48	15.66	18.60	16.74	18.84	3.81	104
45	George W. Laws	31.56	16.26	17.70	17.58	18.18	2.50	101

Merit-roll of naval cadets, third class, 61 members, etc.—Continued.

Order of annual merit.	Name.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Conduct.	Aggregate
		Maxima	40	24	24	24	4	
46	David V. H. Allen	31.68	16.20	17.82	18.06	16.14	2.20	103.70
47	Elisha Theall	30.48	15.20	16.14	16.38	19.08	4.90	102.87
48	Charles W. Lyle	30.72	16.28	17.52	15.48	16.68	5.08	102.32
49	Hornoe G. Macfarland	31.92	17.10	18.36	17.16	15.84	1.31	101.69
r50	Edward G. Russell	31.08	16.14	17.40	16.28	16.80	2.74	101.64
51	Louis H. Gross	31.68	16.50	17.10	17.04	16.62	2.40	101.34
52	Roby Robinson	31.80	16.08	15.72	15.90	16.92	2.87	100.29
53	William W. Beck	30.60	15.06	15.00	15.42	18.00	2.56	97.24
:	Sullivan T. Sparkman	29.16	16.62	19.32	19.86	18.64	6.83	110.03
:	Louis J. Malli	30.60	14.76	19.02	19.26	19.20	4.70	107.54
:	Chester Wells	29.04	16.08	19.26	16.26	17.40	4.23	102.26
:	Bernard H. Camden	33.00	14.18	16.96	16.08	17.70	2.82	100.74
c	Kaga K. Nire	34.44	12.36	15.78	13.02	20.22	4.83	100.63
:	Thomas T. Kellogg	29.52	15.06	16.32	16.50	17.64	2.75	97.79
:	William J. Reese	29.76	14.40	16.44	16.26	16.38	0.83	94.07
a	John K. Robison						6.08	

a Absent, sick; continued with class, subject to examination.
c Continued with class.
r Resigned.

MERIT-ROLL—FOURTH CLASS.

Merit-roll of naval cadets, fourth class, 64 members, annual examination, June, 186

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French, Spanish, and Ger- man.	Conduct.
	Maxims	24	24	24	4
*1	John D. Beuret	21.72	24.54	22.38	3.24
*2	Frederick A. Traut	19.26	21.84	24.12	3.44
*3	William C. Dawson	22.44	19.02	23.82	3.07
*4	Homer L. Ferguson	21.60	21.00	22.14	3.48
*5	Charles T. Jewell	20.52	22.32	21.06	2.50
*6	Luke McNamee	21.30	20.46	20.58	3.51
*7	George C. Day	21.06	22.44	19.02	3.23
8	Joseph E. McDonald	18.90	22.14	18.90	3.61
9	John R. Y. Blakely	18.78	21.24	19.28	3.08
10	Frederick L. Sawyer	21.54	17.34	19.32	3.81
11	Joseph R. Campbell	20.28	18.72	19.68	3.01
12	Aaron L. Gamble	20.76	17.58	19.44	2.91
13	Arthur Rice	18.24	18.30	20.28	3.73
14	Leon S. Thompson	17.88	17.58	21.18	3.87
15	Robert K. Crank	18.60	17.10	21.84	2.89
16	Emmett R. Pollock	19.20	16.56	22.02	2.64
17	Holden A. Evans	20.04	18.84	17.82	3.67
18	Charles L. Hussey	19.98	18.66	18.30	3.23
19	Theodore H. Low	19.38	19.68	18.12	2.44
20	Thomas L. Stitt	19.98	16.56	19.26	3.67
21	Powers Synnington	19.14	15.84	20.88	3.18
22	John F. Hines	18.06	18.72	18.00	3.89
23	Charles Allen	18.00	17.70	19.86	3.09
24	Frederick W. Stopford	18.00	17.52	21.30	1.17
25	Edgar E. Arison	17.88	16.32	21.78	1.91
26	Thomas S. Borden	19.02	15.48	20.88	2.48
27	Gregory C. Davison	18.60	19.38	16.68	3.19
28	Washington D. Gibbs	16.26	20.70	18.12	2.68
29	Joel R. P. Pringle	17.22	15.72	21.48	3.20
30	James Sheehan	16.26	17.58	20.04	3.39
31	Ralph C. Chadbourne	20.46	15.00	17.88	3.73
32	Benjamin B. McCormick	19.32	15.12	18.66	3.49
d33	Herbert E. McReavy	17.64	15.48	20.28	3.12
34	Howard W. Hurlington	19.20	16.92	17.04	3.35
35	Rozier B. Larkin	18.18	15.78	21.26	1.05
36	George Wedekind	18.24	16.56	17.70	3.53
37	Joseph C. Breckinridge	20.22	16.26	18.48	0.79
38	William E. Hoblitzelle	17.76	16.20	17.94	3.81
39	Beriah E. Jones	17.46	16.50	18.30	3.44
40	Yates Stirling, jr	16.86	17.70	19.08	1.83
41	Fred R. Payne	18.78	17.04	18.30	1.11
42	Randolph Ridgely	18.66	16.62	17.40	2.87
43	John H. Russell, jr	16.80	16.68	17.34	3.67
44	Leonard Goodwin	16.62	15.18	19.74	2.89
45	Joseph C. Kilbourne	17.52	16.02	18.66	2.01

d Dismissed.

Merit-roll of naval cadets, fourth class, 64 members, etc.—Continued.

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French, Spanish, and German.	Conduct.	Aggregate.
	Maxima	24	24	24	4	76
46	John Curlett	17.40	15.00	18.12	2.08	54.20
47	Austin R. Davis	15.08	18.24	18.48	1.80	54.18
48	George H. Mather	17.16	15.72	17.24	2.03	52.75
49	Raymond De L. Hasbrouck	17.40	16.44	16.80	2.06	52.69
50	Walter Hall	16.74	16.62	17.28	2.73	52.37
51	Stanley P. Dennett	16.86	16.32	16.98	2.17	52.33
52	George Mallison	17.76	15.78	17.24	2.45	52.33
53	John S. Porter	17.22	16.86	17.04	1.97	51.99
54	Raymond B. Swigart	16.26	15.00	17.46	2.00	52.01
55	Charles F. Macklin	15.72	16.44	17.24	2.22	52.02
56	Philip M. Bannon	16.44	15.18	16.86	2.44	51.92
57	Josiah G. Sawyer	16.50	15.00	16.02	2.83	51.25
58	Edward S. Kellogg	15.78	16.14	15.00	3.76	50.68
†	Christian C. H. Zillman	18.84	14.64	17.70	2.45	54.63
†	Warren Rodney	18.12	14.28	18.12	2.31	53.83
†	Charles T. Pollard, jr	17.16	14.28	19.08	2.11	53.63
†	Stanford E. Moses	16.20	18.14	16.74	2.00	49.74
‡	Rollin R. Nevitt	14.56	14.48	14.70	2.22	49.06
‡	William V. Logan	8.58	7.38	8.46	2.27	27.69

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *Naval Cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one Naval Cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

IV. Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be not less than fifteen nor more than twenty years of age, and physically sound, well-formed, and of robust constitution.—(*Rev. Stat.*, § 1517, and act of Congress approved March 2, 1889.)

V. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examinations shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat.*, § 1515.)

~~NOTE.—"Section 1515 is to be read as if the dates fixed by the regulations of the academy for the examination of candidates for admission were inserted therein; and hence, by the existing law, the season for recommendations and nominations of naval cadets begins after the 5th of March and expires on the 2nd of September in each year."—(Op. xvi, p. 621.)~~

VI. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

VII. "Naval Cadets found deficient at any examination shall not be continued at the Academy or in the service unless upon the recommendation of the academic board."—(*Rev. Stat.*, § 1519.)

VIII. "The academic course of naval cadets shall be six years."—(*Rev. Stat.* § 1520.)

IX. Candidates who may be nominated in time to enable them to reach the academy by the fifteenth of May will receive permission to present themselves on that date to the superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the academy immediately after passing the prescribed examinations.

No leaves of absence will be granted to Cadets of the fourth class.

EXAMINATION.

X. Candidates will be examined physically by a board composed of three medical officers of the navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition to disease;

Any disease, deformity, or result of injury that would impair efficiency; such as—

Weak or disordered intellect;

Cutaneous or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia or undescended testis;

Varicocele, sarcocoele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or concrete, and to use with facility the tables of money, weights, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; *e. g.*,

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus,—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected; thus,—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to h*

been there and seen it. 5. There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: the definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they empty; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands, and colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well known sea-ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude, of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the United States as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the United States, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What did the colony of Pennsylvania include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the United States, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates who pass the physical and mental examinations will receive appointments as naval cadets, and become students at the academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States navy eight years (including his time of probation at the naval academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles; viz.,

One dress jacket	\$21.50	One hand-glass.....	\$0.45
One blouse.....	12.50	One jack-knife .....	.70
Two pairs trousers	23.00	Six sheets.....	3.42
Two working suits	1.86	Hammock clews.....	.40
One overcoat.....	23.50	One pair of bathing trunks.....	.20
One rubber coat.....	4.25	Three pairs of white thread gloves .....	.60
One rubber hat.....	.53	Two black silk neckties .....	.66
Two pairs of regulation leggins....	1.44	Two clothes bags.....	.42
One parade cap	2.55	One hammock mattress	2.85
One knit cap.....	.66	aOne requisition book.....	.40
One mug.....	.09	aOne pass book.....	.40
One soap box .....	.62	aStencil, ink, and brush.....	.45
One laundry book .....	.34	aOne bottle of indelible ink.....	.18
One pair of blankets.....	3.00	aOne wash basin and pitcher.....	.97
Two pairs of high shoes	7.50	aOne pair of gymnasium slippers..	.85
One pair of overshoes.....	.53	*One whisk brush .....	.13
Eight white shirts.....	8.00	*One coarse comb .....	.11
Twelve linen collars	2.04	*One cake of soap.....	.10
Eight pairs of cuffs.....	2.00	*One hair brush.....	.50
*Eight pairs of socks	1.84	*Stationery .....	.50
*Eight towels.....	1.84	*Twelve white handkerchiefs.....	2.52
*Shaving outfit	1.47	*One pair of suspenders.....	.36
*Four pairs of drawers (winter) ...	4.00	*Four night shirts.....	2.52
bFour pairs of drawers (summer)...	1.60	*One tooth brush.....	.20
*Four undershirts (winter).....	4.60	*Thread and needles.....	.15
bFour undershirts (summer).....	1.60	*Blacking brush and blacking....	.39

When moving into cadet quarters, cadets will supply themselves with the following articles; viz.,

a Two bedspreads	\$2.84	a One rug	\$0.90
a Two pairs of drill gloves	1.00	a One hair mattress.....	5.10
a One slop jar .....	.90	a One straw mattress	1.32
a Two spatter-cloths..	.66	a One broom.....	.25
One hair pillow .....	.75	Six pillow cases	1.38
One mirror	1.31		

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice-ship; viz.,

Three working suits	\$2.79	One pair of rubber leggins	\$0.65
Four woolen shirts	7.00	One pair of high shoes	3.75
Three white sailor hats.....	1.20	One knit cap .....	.66

Articles marked *a* will not be taken on board the practice-ship.

Of the articles marked *b* cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the store-keeper.

Each naval cadet must on admission deposit with the pay-officer the sum of \$20, for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the academy.

ADMISSION OF CANDIDATES.

SUMMARY OF EXPENSES.

Deposit for clothing	\$169. 10
Deposit for books, etc	20. 00
	<hr/>
Total amount required	189. 10

The value of clothing brought from home is to be deducted from this amount.
Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in travelling from his home to the academy.
XIV. A naval cadet who voluntarily resigns his appointment within a year of the time of his admission to the academy will be required to refund the amount paid him for travelling expenses.

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
English Studies, History, and Law.	1	4	ENGLISH LITERATURE: Themes, lectures.	Shakespeare's Julius Caesar, Rolfe's edi- tion.
Modern Languages.	2	4	FRENCH: Continuation of first term course. SPANISH: Continuation of first term course. GERMAN: Continuation of first term course.	Same as first term.
Mechanical Drawing.	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, gearing, and details of guns, machinery, and engines; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Tomkin's Machine Construction and Drawing.*

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
Steam Engineering.	3	4	MARINE ENGINES AND BOILERS: Explanation of all the parts of an engine; types of engines; steam valves and other valves; generation of steam; distribution and expansion of steam; screw propellers and side wheels; the indicator and its diagrams; the power of an engine and computations relating to it; hydrometers; saturation; scale and its prevention; casualties; boilers; materials; combustion; transfer of heat; testing steam-engines; the principles of mechanism.	Bennett's Marine Steam-Engine. Goodeve's Elements of Mechanism.
Mechanics and Applied Mathematics.	3	3	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centres of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's Integral Calculus. Johnson's Differential Equations.
Physics and Chemistry.	5	4	PHYSICS: Recitations on simple harmonic motion, wave motions, sound, light, and heat. Practical work in the physical laboratory, experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses, length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrausch's Physical Measurements. Lecture Notes.
Modern Languages	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Professional French Reader. Hollins's Pocket Dictionary.* Sauveur Petite Grammaire.*
Mechanical Drawing	2	4	MECHANICAL DRAWING: Sketching machinery and making working drawings; making tracings and blue prints of drawings perspective.	Tomlin's Machine Construction and Drawing.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; different units of time and calendars; the moon; tides; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	White's Astronomy; Chauvenet's Spherical and Practical Astronomy; Bowditch's Navigator; American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3½	4	Course for first term continued.	
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations in light and heat concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as first term, and Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements. Lecture Notes.
<i>Modern Languages.</i>	1	1½	FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	Same as first term. French newspapers, and books of first term as reference books.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Seamanship, Naval Construction, and Naval Tactics.	4	4	<p>SEAMANSHIP: Uses of compass, lead, log, and sounding machines; principles of marlinspike seamanship, including cutting, fitting, and reeving rigging; description and uses of sails, their fittings and appliances; stowage and organization; management of boats; handling sails; management under sail and under steam; turning and maneuvering, wharfing, docking, towing, piloting, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; control of behavior among waves, and performance in general.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of ship-building in wood, iron, and steel; systems of construction subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship, section and squadron; evolutions of the fleet; signaling by Army and Navy (English Morse) code, Navy and International codes of flag signals.</p>	<p>Luce's Seamanship. Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture. Navy and International Signal Books. Fleet Drill Book. Navy Department</p>
Ordnance and Gunnery.	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat-howitzers and machine-guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions. Text book of Ordnance and Gunnery (Naval Academy publication).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
<i>Ordnance and Gunnery.</i>			<p>INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Upton's Tactics.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Exterior Ballistics (Naval Academy publication).</p> <p>Ordnance Notes, Office of Naval Intelligence.</p>
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; the use of instruments, especially those for determining terrestrial latitudes and longitudes; different units of time; calendars; the moon; tides; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.</p> <p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p>	<p>White's Astronomy.</p> <p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Bowditch's Navigator.</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Bowditch's Navigator.</p> <p>Navigation arranged as a text-book for the U. S. Naval Academy.</p>
<i>Mechanics and Applied Mathematics.</i>	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Elasticity; stress and strain; theory of structures; strength and deflection of beams; beams of uniform resistance.	Cotterill's Applied Mechanics.
<i>Physics and Chemistry.</i>	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric-light wires; experiments upon induction; practice in photography and micro-photography.	<p>Same as second class year.</p> <p>Lecture Notes.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	5	4	Course of the first term continued.	
Ordnance and Gunnery.	5	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns, formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication)</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Accuracy and probability of Fire (Naval Academy publication).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Astronomy, Navigation, and Surveying.	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of the deviation, the determination of the vertical and horizontal forces of the earth and the ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and the heeling errors. Navigation.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of maps.</p>	<p><i>Admiral's Manual</i></p> <p>Hewell's Theory of the Deviations of the Compass.</p> <p>Evans's Elementary Manual for the Deviations of the Compass in Iron Ships.</p> <p>Chauvenet's Spherical and Practical Astronomy. *</p> <p>Hewell's Marine Surveying.</p> <p>Projection Tables.</p> <p>Randell's <i>marine</i>.</p>
English Studies, History and Law.		9.3		
Physiology and Hygiene.	14	4	<p>PHYSIOLOGY AND HYGIENE. General description of the human body and its functions; hæmorrhage, its causes and methods of arrest; drowning, means of resuscitation therefrom; common accidents, measures to be adopted therein; ventilation, necessity for, and means of, in ships and houses; bathing, exercise, clothing; foods, digestibility of, methods of cooking; what the body requires and what it does not require; impure water, alcoholic drinks, tobacco, and other narcotics; their nature and their effects, in various amounts, on the human system; habits, their inheritance, formation, and correction; requisites for a healthy body and a sound mind; specific contagious diseases; lectures, notes, and illustrations.</p>	<p>Cutter's Comparative Physiology.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION
FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	3	4	NAVAL CONSTRUCTION: Definitions; history and practice of ship-building in wood, iron, and steel; systems of construction, subdivision and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.	White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture.
Steam Engineering.	2	4	MARINE ENGINES: General description of modern marine engines and their dependencies; expansion of steam; mean pressure; piston speed; size of cylinders; stroke and revolutions; types of pistons; detailed construction of parts of a cylinder, connecting rod, crosshead, crank shaft, line shaft, frames and journals, thrust bearing; twisting and bending moments; stern tubes and bearings; types of condensers; details of construction; area of condensing surface; arrangement and efficiency of air, circulating, and feed pumps; details of size and construction; types of valves and valve gear; expansion valves and valve diagrams; propellers; theory, efficiency, and details of construction; the indicator and indicator diagrams; power of the engine with necessary calculations; materials used in the construction of machinery with reasons therefor.	Seaton's Marine Engine.
	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected and the resistance offered to the strains; relative value of materials used in machinery; testing materials; principles and considerations governing the design, drawing, specifications, and proportioning of various parts of boilers and engines, with practical applications in the designing room.	Unwin's Elements of Machine Design. Shock's Marine Boilers.
	3	4	FABRICATION. Practical work in the machine shop.	

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mechanics and Applied Mathematics.</i>	3	4	Same as for line division.	
<i>Physics and Chemistry.</i>	3	4	Heat and Analytical Chemistry.	Same as for second class year. Lecture Notes.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	5	4	Course of the first term continued.	
<i>Steam Engineering.</i>	3	4	MARINE ENGINES: Continuation of first term course. Physical properties of steam; convertibility of heat and work; theory of the steam-engine; air and heat engines; efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction and re-evaporation; experiments on the steam-engine, and the methods of determining its efficiency	Seaton's Marine Engine. Cotterill's Steam Engine Considered as a Heat Machine.
	3	4	BOILERS: Types and efficiency of marine boilers; combustion; fuel; evaporation; draught; construction of boilers in detail, and materials used in them; details of fitting and attachments; causes of deterioration; care and preservation of boilers.	Shock's Steam Boilers.
	3	4	DESIGNING MACHINERY: Continuation of first term course.	Unwin's Elements of Machine Design. Shock's Marine Boilers.
<i>Mechanics and Applied Mathematics.</i>	3	4	APPLIED MECHANICS: Kinematics and dynamics of machines; transmission and conversion of energy by fluids.	Cotterill's Applied Mechanics.
<i>Physiology and Hygiene.</i>	1½	4	Same as for line division.	

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics							4	5	2	3
Ordnance and Gunnery							3	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam engineering.....					3	3			3	0
Mechanics and Applied Mathematics					5	5	3		3	3
Physics and Chemistry				5 F	5	4	2		3	
Mathematics.....	6	5	5	5						
English Studies, History, and Law....	5	5	4	1				F		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing.....			4	2½	2	1				
Physiology and Hygiene.....								1½		1½

F, Friday, 7.30 to 9.30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM—1889 '90.

Departments.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying.....				M. W. F. S. (1) .....	.....
English Studies, History, and Law.....	M. T. W. Th. F. (2)	M. F. S. (1), T. (3) .....		.....	.....
Mathematics.....	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2) .....		.....	.....
Mechanical Drawing.....		M. W. Th. F. (3)	T. (3), S. (1) .....	.....	.....
Mechanics and Applied Mathematics.....			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Modern Languages.....	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (7.30 to 9.30 p.m.) * .....	.....	.....
Ordnance and Gunnery.....				T. Th. (2), F. (3) .....	.....
Physics and Chemistry			M. (3), T. W. Th. F. (2)	T. Th. (1)	T. Th. F. (1)
Seamanship and Naval Construction.....				M. T. W. Th. (3)	M. W. (3)
Steam Engineering.....			W. Th. F. (3) .....	.....	{ M. (1), T. (2) (3), W. (1), Th. (2) (3), F. (3), S. (1).

SECOND TERM.

Astronomy, Navigation, and Surveying.....			W. F. (3)	M. T. Th. F. (1) .....	.....
English Studies, History, and Law.....		M. (1)		F. (7.30 to 9.30 p.m.) * .....	.....
Mathematics.....		M. T. W. Th. F. (2) .....		.....	.....
Mechanical Drawing.....		T. Th. (3), S. (1) †	W. (2) .....	.....	.....
Mechanics and Applied Mathematics.....			M. T. W. Th. F. (1) .....	.....	M. T. Th. (2)
Modern Languages.....	M. T. W. Th. F. (2), S. (1) †	W. F. (3)	S. (1) †, F. (7.30 to 9.30 p.m.) * .....	.....	.....
Ordnance and Gunnery.....				M. T. W. Th. F. (2) .....	.....
Physics and Chemistry		{ M. (3), T. W. Th. F. (1), F. (7.30 to 9.30 p.m.) * }	M. T. Th. F. (2) .....	.....	.....
Physiology and Hygiene				W. (3), S. (1) †	W. (3), S. (1) †
Seamanship and Naval Construction.....				M. T. Th. F. (3), W. (1)	M. F. (3), W. (1)
Steam Engineering.....			M. T. Th. (3) .....	.....	{ M. (1), T. (1) (3), W. (2), Th. (1) (3), F. (1) (2), F. (7.30 to 9.30 p.m.) * }

* Lectures and practical instruction.

† Saturday period, second term, from January 31 to March 10.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics							4	5	3	3
Ordnance and Gunnery							3	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam engineering.....					3	3			3	3
Mechanics and Applied Mathematics					5	5	3		3	3
Physics and Chemistry				5 F	5	4	2		3	
Mathematics.....	6	5	5	5						
English Studies, History, and Law....	5	5	4	1				F		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing.....			4	2½	2	1				
Physiology and Hygiene.....								1½		1½

F, Friday, 7.30 to 9.30 p. m.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise: handling and firing torpedoes; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

TABLE OF CO-EFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>									
Seamanship, Ship Building, and Naval Tactics				17	9		36	36	32
Cruise Reports, Navigation Note Books, Journals, and Station Bills.....								24	26
Practice Cruise.....				5		88			
<i>Ordnance and Gunnery.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery				18		72		44	
Ordnance and Gunnery									
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying....			3	12			12	44	
Practice Cruise				3		76			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers			12					20	
Summer Practical Work.....			3		6	60			
Marine Engines					10				48
Designing Machinery.....					13				
Fabrication.....					6				
Boilers.....					7		224		36
<i>Mechanics and Applied Mathematics.</i>									
Differential and Integral Calculus, and Mechanics			15						
Least Squares and Strength of Materials				5	5	80			
Mechanics.....					6		164		
<i>Physics and Chemistry.</i>									
Chemistry and Physics.....		6			6				
Physics.....			12						
Physics.....				5		92	96		
<i>Mathematics.</i>									
Algebra and Geometry	6								
Trigonometry, Analytical Geometry, and Descriptive Geometry		12				72	72		
<i>English Studies, History, and Law.</i>									
English and History.....	6								
English, History, and Law.....		6		2		56	48	34	
<i>Modern Languages.</i>									
French, Spanish, and German.....	6	6	5			68	68	28	28
<i>Mechanical Drawing.</i>									
Mechanical Drawing		6	4			40	40		
<i>Miscellaneous.</i>									
Physiology and Hygiene				3	3	12	12		
Conduct	1	2	3	5	5	44	44		
Maxima for each class	76	152	228	204	304	760	760	240	240
Deduction for each demerit.....	0.013	0.022	0.030	0.123	0.123				

*In making up the standing for a year the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Aca- demic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company (4).	Company (4).	Target great guns(4).	Steam tactics (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	2	Battery (4).	Battery (4).	Steam tactics (4).	Target great guns (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns(4).	Steam tactics (4).	Company (4).	Company (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec	2	Steam tactics (4).	Target great guns(4).	Battery (4).	Battery (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battal'n infantry(4).	Battal'n infantry(4).	Battal'n infantry(4).	Battal'n infantry(4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Jan	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	1	Broadword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Broadword.	Steam.	Practical ordnance.
	3	Practical ordnance	Steam.	Broadword.	Steam.
Feb	4				
	1	Steam.	Practical ordnance.	Steam.	Broadword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
Mar	4	Practical ordnance.	Steam.	Small sword.	Steam.
	1				
	2				

SEMI-ANNUAL EXAMINATION.

Feb ...	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadword.	Steam.
Mar	1	Steam.	Seamanship.	Steam.	Broadword.
	2	Devlat n compass(4).	Devlat n compass(4).	Devlat'n compass(4).	Devlat'n compass (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April	4	General quarters.	General quarters.	General quarters.	General quarters.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May ...	3	Skirmish (4).	Target great guns(4).	Torpedoes (4).	Steam tactics (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June ...	1	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns(4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battal'n infantry(4).	Battal'n infantry(4).	Battal'n infantry(4).	Battal'n infantry(4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
July ...	3	Battal'n artillery(2).	Battal'n artillery(2).	Battal'n artillery(2).	Battal'n artillery(2).
		Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	4	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
		General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
Aug ...	5				
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	General quarters.	General quarters.	General quarters.	General quarters.
Sept ...	Th	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S	Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION.

June 1 to 10 }
June 10 to Aug 25 }
Sept ... }

Practice cruise.
On leave

SECOND CLASS.

Aca- demic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Pivot guns.	Steam launches.
	2	Battery.	Battery.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Steam launches.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
Jan.....	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar.....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns(4).	Skirmish (4).	Steam tactics (4).	Target machine guns (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target great guns(4).	Target machine guns (4).	Steam tactics (4).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	Steam tactics (4).	Target machine guns (4).	Target great guns(4).	Skirmish (4).
May.....	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Target machine guns (4).	Steam tactics (4).	Skirmish (4).	Target great guns(4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	7	Seamanship (8).	Seamanship (3).	Seamanship (3).	Seamanship (8).
	8	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	9	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(Fifth week.)	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10	} ..	ANNUAL EXAMINATION.			

SECOND CLASS.

Summer months.	Weeks	First division.	Second division.	Third division.	Fourth division.
	1	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Signals p. m.	Machine-shop a. m. Target howitzers p. m.
	2	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Signals p. m.
	3	Machine-shop a. m. Signals p. m.	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine-guns.
	5	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	6	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Target small arms p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.
	7	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Target small arms p. m.	Machine-shop a. m. Boats p. m.
	8	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Target small arms p. m.
	9	Machine-shop a. m. Target small arms p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.
	10	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
Sept	1	On leave.	On leave.	On leave.	On leave.
	2				
	3				
	4				

THIRD CLASS.

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Pivot guns.	Boats.
	2	Battery.	Battery.	Boats.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Boats.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Pivot guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan.....	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Target small arms.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar.....	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
April....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target sm'll arms(4).	Skirmish (4).	Seamanship (4).	Boat (4).
	3	General quarters(1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target sm'll arms(4).	Boats (4).	Seamanship.
		Seamanship (1).	Seamanship (1).	Seamanship (1).	
	4	Seamanship.	Boats (4).	Target sm'll arms(4).	Skirmish (4).
May.....	1	Boats (4).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battl'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
		Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
		Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
		Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
		General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(Fifth week.)	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 8.	ANNUAL EXAMINATION.				
June 9 to Aug. 30.	Practice cruise.				
Sept.....	On leave.				

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	During the academic year.				Total num- ber of in- structions during academic year.	During summer months.			Total num- ber of in- structions, exclusive of practice crises.
	First class.	Second class.	Third class.	Fourth class.		Second class.	Third class.	Fourth class.	
School of the batteries, infantry	10	11	11	11	43	.....	.....	.....	43
Marine drill	4	4	4	4	16	.....	.....	.....	16
Boarding	10	9	.....	.....	19	.....	.....	.....	19
Small craft	5	10	10	.....	25	.....	.....	.....	25
Practical instruction in direction of companies	4	.....	.....	.....	4	(*)	.....	.....	4
Practical instruction, navigation	114	112	.....	.....	.....	(*)	.....	.....	127
Practical instruction, surveying	110	.....	.....	.....	.....	.....	.....	.....	110
Machine-shop and running shop engines	20 and 113	20	.....	.....	40	34	.....	.....	114 and 113
Running steam launches .....	.....	5	.....	.....	5	6	.....	.....	11
Practical instruction in chemistry .....	.....	.....	112	.....	.....	.....	.....	.....	112
Gymnastics .....	.....	.....	.....	20	20	.....	.....	.....	20
Swimming .....	.....	.....	.....	.....	.....	.....	.....	26	26
Diving .....	.....	.....	.....	20	20	.....	.....	.....	20

* Practice crises.

18 study periods.

The instructions in seamanship and gunnery on board of the *Wyandott*, *Panama*, and *Albatross* are also made instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

SUMMARY OF PRACTICAL INSTRUCTION.

PRACTICAL INSTRUCTION.

Kind of instruction.	During the academic year.				Total num-ber of in-structions during academic year.	During summer months.				During month of September, fourth class.	Total num-ber of in-structions, exclusive of practice of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging <i>Wyoming</i>	83	33	37	25	138	(*)	.....	(*)	(*)	.....	138
Rigging loft .....	.....	.....	15	19	34	.....	.....	.....	.....	.....	34
Boats under oars, or sail .....	.....	.....	10	10	20	(*)	15	(*)	(*)	.....	35
Naval tactics with steam launches.....	12	8	.....	.....	20	.....	5	.....	.....	.....	25
Navy signals, day.....	.....	5	.....	.....	5	(*)	3	.....	.....	.....	8
Navy signals, night.....	.....	.....	.....	.....	.....	(*)	3	.....	.....	.....	3
Army signals, day .....	.....	.....	5	.....	5	.....	2	.....	.....	.....	7
Army signals, night .....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Monitor, with great gun practice	5	.....	.....	.....	5	.....	.....	.....	.....	.....	5
General quarters	6	6	6	6	24	(*)	.....	(*)	(*)	.....	24
General quarters, with target practice.....	4	4	4	4	16	(*)	.....	(*)	(*)	.....	16
Target practice, great guns.....	8	4	.....	.....	12	.....	5	.....	.....	.....	17
Pivot guns.....	.....	5	9	.....	14	.....	.....	.....	.....	.....	14
Broadside guns .....	.....	.....	10	10	20	(*)	.....	(*)	(*)	.....	20
Torpedoes	4	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Practical ordnance.....	10	5	.....	.....	15	.....	.....	.....	.....	.....	15
Howitzers afloat .....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	5
Target practice, howitzers.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	5
School of section.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	10
School of battery	4	5	5	5	19	.....	.....	.....	.....	.....	19
School of battalion artillery	8	8	8	8	32	.....	.....	.....	.....	.....	32
Target practice, machine guns.....	.....	4	.....	.....	4	.....	5	.....	.....	.....	9
Target practice, small-arms.....	.....	.....	9	.....	9	.....	5	.....	.....	.....	14
Target practice, pistols.....	.....	.....	5	.....	5	.....	.....	.....	.....	.....	5
School of the soldier.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	24
sol of the company	4	5	5	9	23	.....	.....	.....	.....	.....	23

* Practice cruise.

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	During the academic year.				Total num-ber of in-structions during academic year.	During summer months.				Total num-ber of in-structions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the Battalion, Infantry	10	11	11	11	43	..	.....	.....	.....	43
Shirash drill	4	4	4	4	16	.....	.....	.....	.....	16
Drumward	10	9	.....	.....	19	.....	.....	.....	.....	19
Small sword	5	10	18	..	33	.....	.....	.....	.....	33
Practical instruction in deviation of compass	4	.....	.....	.....	4	(*)	.....	.....	.....	4
Practical instruction, navigation	114	113	.....	.....	.....	(*)	.....	.....	.....	127
Practical instruction, surveying	110	.....	.....	.....	.....	.....	.....	.....	.....	110
Machine-shop and running aboard engines	20 and 113	20	.....	.....	60	.....	54	.....	.....	114 and 113
Running steam launches .....	.....	5	.....	.....	5	.....	6	.....	.....	11
Practical instruction in chemistry .....	.....	.....	113	.....	.....	.....	.....	.....	.....	113
Gymnastics .....	.....	.....	.....	20	20	.....	.....	.....	.....	20
Swimming .....	.....	.....	.....	.....	.....	.....	.....	.....	24	24
Diving .....	.....	.....	.....	20	20	.....	.....	.....	.....	20

* Practice cruises.

! Study periods.

The instructions in seamanship and gunnery on board of the *Wyoming*, *Pascata*, and *Standish* are also made instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

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ANNUAL REGISTER

TOPAGE

400

OF THE

UNITED STATES NAVAL ACADEMY.

ANNAPOLIS, MD.

ACADEMIC YEAR OF 1890-'91.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

ACADEMIC YEAR OF 1890-'91.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

THE UNITED STATES NAVAL ACADEMY.

FORTY-SIXTH ACADEMIC YEAR.*

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea, and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

* The number of the academic year was first printed in the Annual Register of 1865-'66, and was reckoned from the reorganization of the Naval School in 1850, when its name was changed to the United States Naval Academy. The number is now amended by the addition of five years, thus reckoning from 1845, the year in which the Academy was founded and formally opened.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanism, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and, from those who successfully complete the six years' course appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps: And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do receive such appointment shall be given a certificate of graduation, an honor-

able discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

“That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of four years' course at the Naval Academy, with a proper certificate of graduation.”

The act of Congress, approved March 2, 1889, provides that “the Academic Board of the Naval Academy shall, on or before the thirtieth day of September in each year, separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of their respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the Navy and Marine Corps of the Navy shall bear to the number of vacancies to be supplied from the Academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the Navy; and the cadets so assigned to the line and Marine Corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the Navy, and the cadets so assigned to the Engineer Corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the Engineer Corps of the Navy, and the cadets shall thereafter, and until final graduation, at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and Marine Corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the Navy and Marine Corps; and the vacancies in the lowest grades of the commissioned officers of the Engineer Corps of the Navy shall be filled in like manner by appointments from the final graduates of the Engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the Academic Board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the Academic Board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the Navy, and not less than two shall be appointed annually to the Engineer Corps of the Navy, nor less than one annually to the Marine Corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available; * * * * *

“That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the Academy shall be fifteen years and the maximum age twenty years.”

SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command:

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Uphur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.
June 30, 1890.—Captain R. L. Phythian.

BOARD OF VISITORS, JUNE, 1890.

Rear-Admiral L. A. KIMBERLY, U. S. Navy, *President.*
Hon. J. C. S. BLACKBURN, U. S. Senate, *Vice President.*

Hon. EUGENE HALE.....	U. S. Senate.
Hon. C. A. BOUTELLE.....	U. S. House of Representatives.
Hon. W. C. WALLACE.....	U. S. House of Representatives.
Hon. H. W. RUSK.....	U. S. House of Representatives.
Hon. MARSHALL M. MURDOCK.....	Wichita, Kansas.
Hon. WILLIAM A. NORTHCOTT.....	Greenville, Illinois.
Hon. H. W. ELLIOTT.....	Newcastle, Indiana.
Hon. J. H. GALLINGER.....	Concord, New Hampshire.
Hon. W. STUART WALCOTT.....	Utica, New York.
Hon. A. W. CAMPBELL.....	Wheeling, West Virginia.

ACADEMIC CALENDAR.

1890-1891.

1890.		
Oct.	1.—Beginning of first term	Wednesday.
1891.		
Jan.	26-31.—Semi-annual examination	Monday-Saturday.
Jan.	31.—End of first term	Saturday.
June	1-6.—Annual examination	Monday-Saturday.
June	6.—End of academic year, 1890-'91	Saturday.
May	15.—Examination of candidates for admission as naval cadets	Friday.
Sept.	1.—Examination of candidates for admission as naval cadets	Tuesday.
Oct.	1.—Beginning of first term, 1891-'92	Thursday.

The academic months end on the following days:

1890-1891.			
October	Nov. 1	February	Feb. 2-
November	Nov. 29	March	Mar. 2-
December	Dec. 27	April	Apr. 2-
January	Jan. 24	May	May 2-
1891-1892.			
October	Oct. 31	December	Dec. 26
November	Nov. 28	January	Jan. 23

CALENDAR FOR 1890-91.

SEPTEMBER.							MARCH.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
---	1	2	3	4	5	6	1	2	3	4	5	6	7
7	8	9	10	11	12	13	8	9	10	11	12	13	14
14	15	16	17	18	19	20	15	16	17	18	19	20	21
21	22	23	24	25	26	27	22	23	24	25	26	27	28
28	29	30	---	---	---	---	29	30	31	---	---	---	---
OCTOBER.							APRIL.						
---	---	---	1	2	3	4	---	---	---	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11
12	13	14	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30	31	---	26	27	28	29	30	---	---
NOVEMBER.							MAY.						
---	---	---	---	---	---	1	---	---	---	---	---	1	2
2	3	4	5	6	7	8	3	4	5	6	7	8	9
9	10	11	12	13	14	15	10	11	12	13	14	15	16
16	17	18	19	20	21	22	17	18	19	20	21	22	23
23	24	25	26	27	28	29	24	25	26	27	28	29	30
30	---	---	---	---	---	---	31	---	---	---	---	---	---
DECEMBER.							JUNE.						
---	1	2	3	4	5	6	---	1	2	3	4	5	6
7	8	9	10	11	12	13	7	8	9	10	11	12	13
14	15	16	17	18	19	20	14	15	16	17	18	19	20
21	22	23	24	25	26	27	21	22	23	24	25	26	27
28	29	30	31	---	---	---	28	29	30	---	---	---	---
JANUARY.							SEPTEMBER.						
---	---	---	---	1	2	3	---	---	---	---	---	---	---
4	5	6	7	8	9	10	6	7	8	9	10	11	12
11	12	13	14	15	16	17	13	14	15	16	17	18	19
18	19	20	21	22	23	24	20	21	22	23	24	25	26
25	26	27	28	29	30	31	27	28	29	30	---	---	---
FEBRUARY.							OCTOBER.						
1	2	3	4	5	6	7	---	---	---	---	1	2	3
8	9	10	11	12	13	14	4	5	6	7	8	9	10
15	16	17	18	19	20	21	11	12	13	14	15	16	17
22	23	24	25	26	27	28	18	19	20	21	22	23	24
---	---	---	---	---	---	---	25	26	27	28	29	30	31

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,
CAPTAIN R. L. PHYTHIAN.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT D. D. V. STUART.

Assistant to the Superintendent and Secretary of the Academic Board

LIEUTENANT G. A. MERRIAM.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER HENRY GLASS.

LIEUTENANT-COMMANDER W. W. GILLPATRICK, Assistant.
LIEUTENANT J. M. HAWLEY, Assistant and Drill Officer.
LIEUTENANT W. P. POTTER, Assistant and Drill Officer.
LIEUTENANT G. B. HARKER, Assistant and Drill Officer.
LIEUTENANT C. D. GALLOWAY, Assistant.
LIEUTENANT ALEXANDER SHARP JR., Assistant and Drill Officer.

SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTIC.

Head of Department,
COMMANDER C. D. SIGSBEE.

Assistants,
LIEUTENANT W. P. CLARKE.
LIEUTENANT C. B. T. MOORE
LIEUTENANT W. S. BROWN

Instructor in Business Swimming and Gymnastics,

MATTHEW STROHM

ORDNANCE AND GUNNERY.

Head of Department,

LIEUTENANT-COMMANDER C. S. SPERRY.

Assistants,

LIEUTENANT R. R. INGERSOLL,
LIEUTENANT H. C. GEARING.

Sword-Master,

A. J. CORBESIER.

Assistant Sword-Masters,

J. B. RETZ,
G. HEINTZ.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Head of Department,

LIEUTENANT C. G. BOWMAN.

Assistants,

LIEUTENANT U. R. HARRIS,
LIEUTENANT W. F. LOW,
LIEUTENANT EDWARD LLOYD, jr.

STEAM ENGINEERING.

Head of Department,

CHIEF ENGINEER H. W. FITCH.

Assistants,

PASSED ASSISTANT ENGINEER J. K. BARTON,
PASSED ASSISTANT ENGINEER R. G. DENIG,
PASSED ASSISTANT ENGINEER G. S. WILLITS,
ASSISTANT ENGINEER B. C. SAMPSON.

MECHANICS AND APPLIED MATHEMATICS.

Head of Department,

LIEUTENANT-COMMANDER J. P. MERRELL.

Assistants,

LIEUTENANT T. B. HOWARD,
ENSIGN JOHN HOOD,
ENSIGN C. M. KNEPPER.

PHYSICS AND CHEMISTRY.

Head of Department,

PROFESSOR N. M. TERRY, A. M., PH. D.

Assistants,

LIEUTENANT W. G. CUTLER,
LIEUTENANT R. T. WALLING,
LIEUTENANT O. G. DOINIE,
LIEUTENANT R. H. MINER,
PROFESSOR C. R. SANGER, A. M., PH. D.

MATHEMATICS.

Head of Department,

LIEUTENANT-COMMANDER HARRY KNOX.

Assistants,

LIEUTENANT JOHN GARVIN,
LIEUTENANT J. M. ORCHARD,
ENSIGN H. G. DRESEL,
ENSIGN HARRY PHILIPS,
ENSIGN C. B. WILLIAMS.

ENGLISH STUDIES, HISTORY, AND LAW.

Head of Department,

COMMANDER J. E. CRAIG.

Assistants,

LIEUTENANT J. B. MILTON,
LIEUTENANT J. C. CRESAP,
LIEUTENANT E. B. UNDERWOOD,
PROFESSOR W. W. FAY, A. M.

MODERN LANGUAGES.

Head of Department,

LIEUTENANT ROBERT G. PECK.

Assistants,

LIEUTENANT J. T. SMITH,
PROFESSOR L. F. PRI'D'HOMME, A. M.,
PROFESSOR JULES LEROUX,
ASSISTANT PROFESSOR HIPOLYTE DALMON,
ASSISTANT PROFESSOR HENRI MANON,
ASSISTANT PROFESSOR SAMUEL GARVER, PH. D.

MECHANICAL DRAWING.

Head of Department,

LIEUTENANT H. O. RITTENHOUSE.

Assistants

PROFESSOR MARSHALL OLIVER
ASSISTANT PROFESSOR C. F. HEAVELT.

PHYSIOLOGY AND HYGIENE.

Head of Department,

MEDICAL INSPECTOR B. H. KIDDER, M. D.

Assistants,

SURGEON G. E. H. HARMON, M. D.,
PASSED ASSISTANT SURGEON PHILIP LEACH, M. D.*
PASSED ASSISTANT SURGEON L. W. CURTIS, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

OFFICERS NOT ATTACHED TO THE ACADEMIC STAFF.

LIEUTENANT W. H. REEDER, *in Charge of Ships.*
ASSISTANT SURGEON S. G. EVANS, M. D.
PAY DIRECTOR J. D. MURRAY, *Pay Officer.*
PAY DIRECTOR CASPAR SCHENCK, *Commissary and General Storekeeper.*
CHAPLAIN H. H. CLARK.
ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*
J. M. SPENCER, *Assistant Librarian.*
R. M. CHASE, *Secretary.*

Attached to the Ships,

BOATSWAIN J. S. SINCLAIR,
GUNNER R. SOMMER,
CARPENTER G. W. CONOVER.

MATES.

Attached to the Santee, the Wyoming, and the Phlox,

SAMUEL GEE, B. G. PERRY,
C. J. MURPHY, W. G. SMITH.

MARINE OFFICERS.

CAPTAIN H. A. BARTLETT, *Commanding Marines,*
CAPTAIN J. M. T. YOUNG,
FIRST LIEUTENANT H. K. WHITE.

ACADEMIC BOARD.

THE SUPERINTENDENT.
THE COMMANDANT OF CADETS.
THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.
THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.
THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.
THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.
THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.
THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.
THE HEAD OF THE DEPARTMENT OF MATHEMATICS.
THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.
THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.
THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.
THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

*Also in charge physical training of cadets.

CADET OFFICERS.

CADET LIEUTENANT-COMMANDER,

F. B. ZAHM.

CADET LIEUTENANT AND ADJUTANT,

R. R. BELKNAP.

CADET LIEUTENANTS,

N. E. IRWIN,
A. L. WILLARD,

R. J. HARTUNG,
J. G. F. MOALE.

CADET MASTERS,

H. G. GILLMOR,
H. G. SMITH,

C. D. STRAHER,
R. L. FLOWERS.

CADET ENSIGNS,

R. M. WATT,
E. T. POLLOCK,

W. EVANS,
E. TREALL.

CADET PETTY OFFICERS OF THE FIRST CLASS,

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
SMITH, H. E., McKELVY, KOCHERSPERGER.	ALTHOUSE, BICKEL, LEIGH.	SENN, KUNZEL, BLAMER.	MACFARLAND, McLEMORE, HOUGH.

CADET PETTY OFFICERS OF THE SECOND CLASS,

MCDONALD, EVANS, MOSES.	BECKET, HINER, LOW.	MCFARLANE, DAWSON, HUSSEY.	DAY, HUFFINGTON, HOBBS.
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SUMMER CRUISE, 1890.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP CONSTELLATION.

June 9 to August 30.

COMMANDER HENRY GLASS *Commanding.*
LIEUTENANT-COMMANDER W. W. GILLPATRICK,
Executive Officer.
LIEUTENANT G. B. HARNER, *Instructor in Navigation.*
LIEUTENANT W. P. CLARKE, *Navigator.*
LIEUTENANT W. G. CUTLER, *Watch Officer.*
LIEUTENANT DAVID DANIELS, *Watch Officer.*

LIEUTENANT O. G. DODGE, *Watch Officer.*
ENSIGN R. H. MINER, *Watch Officer.*
ENSIGN H. G. DRESEL, *Watch Officer.*
SURGEON R. S. MACKIE.
ASSISTANT SURGEON C. H. T. LOWMYER.
PAYMASTER I. GOODWIN HORBA.
CHAPLAIN E. K. RAWSON.

NAVAL CADETS.

First Class.

Allen,
Althouse,
Belknap,
Bierer,
Blamer,
Blount,
Brotherton,
Caldwell,
Carter,
Christy,
Emrich, *f*
Evans,
Flowers,
Ford,
Gillmor,
Gross,

Hartung,
Hough,
Irwin,
Kochersperger,
Kuensli,
Lane,
Leigh,
Macfarland,
McKelvy,
McLemore, *h*
Moale,
Ninde,
Nire,
Pollock,
Preston,
Reed, *f*

Richards,
Robinson, *k*
Senn,
Shepard, *f*
Smith, H. E.,
Smith, H. G.,
Smith, L. G.,
Stearns, C. D.,
Sypher,
Theall,
Watt,
Willard,
Williams,
Zahn.

Third Class.

Asbury,
Bagley,
Baird,
Berry,
Bisset,
Brady,
Campbell,
Carver,
Chadwick,
Clark,
Coleman,
Cook, *m*
Crocker,
Crosley,
Cruse,
Doddridge,
Douglas,
Elder,
Feild,
Fewell,
Fitch,

Gise,
Groesbeck,
Groff,
Hains,
Holsinger,
Hooker,
Jackson,
Jones, L. B., *m*
Kellogg,
Lang,
Logan,
Magill,
McKethan,
Montgomery,
Morris,
Nutting,
Parker,
Pearson,
Perry,
Peugnet,
Potter,

Powell,
Powelson,
Pratt,
Price, *m*
Procter,
Read,
Ryan, J. P. J.,
Scott,
Shaw,
Stearns, E. C.,
Sticht,
Sturdevant,
Townsend, *m*
Trench,
Upham,
Valentine,
Ward,
Whitman,
Wilson,
Wishart.

Fourth Class.

Ryan, G. W. *m n*

NAVAL CADETS RETAINED AT THE ACADEMY FOR MACHINE SHOP AND OTHER PRACTICAL INSTRUCTION.

First Class—Engineer Division.

Emrich, *f*
Laws,
McGrann.

Reed, *f*
Robison,

Rowen,
Shepard, *f*

Second Class.

Allen, C.,
Arison,
Ball,
Bannon,
Beuret,

Blakely,
Borden,
Breckinridge,
Campbell,
Crank,

Davis,
Davison,
Dawson,
Day,
Dennett,

f Detached from practice ship June 28, on assignment to Engineer Division.

h Transferred sick to Naval Academy July 26.

k Granted sick leave by Department July 15.

m Joined ship on June 14.

n Granted leave August 9.

Second Class—Continued.

Evans,
Ferguson,
Gamble,
Gibbs,
Hasbrouck,
Hines,
Hoblitzelle,
Huntington,
Hussey,
Jewell,
Jones, B. E.,
Kellogg, E. S.,
Low,
Macklin,

Mallison,
Mather,
McCormick,
McDonald,
McNamee,
Moses,
Myers,
Payne,
Pollard,
Pollock,
Porter,
Pringle,
Rice,

Rodney,
Russell,
Sawyer, F. L.,
Sawyer, J. G.,
Sheehan,
Stirling,
Stitt,
Stopford,
Symington,
Thompson,
Traut,
Wedekind,
Zillman.

Fourth Class

Batta,
Berryman,
Blandy,
Chappell,
Chester,
Churchill,
Cooper,
De Lang,
Emery,
Fullinwider,
Gelm,
Graham,

Greer,
Hull,
Jones, L. B.,
Kavanagh,
Lane,
Lyon,
McCormack,
McLean,
Osborn,
Perkins,
Ridgely,
Robert, W. P.,

Roberts, T. G.,
Sandoz,
Scott,
Sellers,
Snow,
Spear,
Talcott,
Tolfree,
Turpin,
Whitted,
Winship.

SUMMARY.

On board United States Practice Ship <i>Constellation</i>	:	"
Remaining at the Academy.....	:	"
Total	:	:

SYNOPSIS OF THE CRUISE, 1890.

CONSTELLATION.

Cadets, first and third classes, embarked June 9.
Sailed from Annapolis June 11.
Passed Cape Henry bound to New London, Conn., June 20.
Arrived at New London, Conn., June 26.
Inspected by Secretary of the Navy, at New London, July 6.
Cruised in Long Island Sound and vicinity until August 18.
Sailed from New London for Annapolis August 18.
Passed Cape Henry, bound to Annapolis, August 23.
Arrived at Annapolis August 27.
Cadets disembarked August 30.

RELATIVE STANDING OF NAVAL CADETS.

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for Engineer Division.

r Resigned.

Class of naval cadets appointed 1885, performing required service afloat.

Order of merit.	Name.	State from which appointed.	Date of admission.
1	Hebeon, Richard P.	Alabama.....	May 21, 1885
2	Rocky, George Henry	Michigan.....	May 20, 1885
3	Rock, Arthur Robinson	At large.....	Sept. 28, 1885
4	Swining, Nathan Curtis	Wisconsin.....	Sept. 4, 1885
5	Hatch, Benjamin Franklin	Missouri.....	Sept. 5, 1885
6	Quinn, William Vernon	Maine.....	Sept. 9, 1885
7	Kittelle, Sumner Eliza	New York.....	May 19, 1885
8	Marshall, George Ralph	Massachusetts.....	Sept. 7, 1885
9	Hutton, Louis McCoy	Virginia.....	Sept. 8, 1885
10	Bacon, Lewis Clark	Ohio.....	Sept. 9, 1885
11	Butter, John August	South Carolina.....	May 21, 1885
12	Newman, Barton Stephen	New Jersey.....	May 22, 1885
13	Long, Charles Grant	Massachusetts.....	Sept. 7, 1885
14	Wadsworth, William David	New York.....	May 19, 1885
15	Wadsworth, George William	Missouri.....	Sept. 7, 1885
16	Magnum, Thomas Fickett	Mississippi.....	Sept. 8, 1885
17	Lowder, Edward Rutledge	Michigan.....	Sept. 29, 1885
18	de Stignon, Louis Rudolph	Ohio.....	Mar. 17, 1885
19	Hand, George Henry	Texas.....	Sept. 4, 1885
20	Blair, William Woodward	Maryland.....	May 19, 1885
21	Kelley, Louis Henry	Illinois.....	May 20, 1885
22	Olsen, Cleland Nelson	Indiana.....	Sept. 5, 1885
23	Cole, William Sandy	Illinois.....	Sept. 5, 1885
24	Kirchell, George Grant	Indiana.....	Sept. 7, 1885
25	Ball, Henry Edward	Michigan.....	May 22, 1885
26	Brady, Charles Augustine	Connecticut.....	Sept. 8, 1885
27	Wadsworth, William	Vermont.....	Sept. 4, 1885
28	Gunn, Robert Henry	Wisconsin.....	May 21, 1885
29	Forbes, Herman Jay	New Jersey.....	May 19, 1885
30	Dutton, Robert McMillan	California.....	Sept. 4, 1885
31	Henderson, William Kellogg	Texas.....	May 23, 1885
32	Decker, John	Wisconsin.....	Sept. 7, 1885
33	Henderson, George Lucien	Indiana.....	May 21, 1885

Class appointed in 1886, performing required

Order of general merit.	Class appointed in 1886, performing required		
	Name.	State.	Date of admission.
1	Buhr, Thomas Francis.....	Tennessee.....	May 21, 1886
2	Spear, Lawrence.....	Ohio.....	May 19, 1886
3	Coleman, Noah Tunnicliff.....	New York.....	May 21, 1886
4	Schofield, Frank Herman.....	New York.....	May 21, 1886
5	Chase, Jehu Valentine.....	Louisiana.....	Sept. 29, 1886
6	Gartley, Alonzo.....	Iowa.....	May 22, 1886
7	Ziegemeler, Henry Joseph.....	Ohio.....	May 21, 1886
8	Davis, Cleland.....	Kentucky.....	May 22, 1886
9	Signor, Matt. Howland.....	Nebraska.....	May 21, 1886
10	Blankenship, John Millington.....	Virginia.....	May 20, 1886
11	Buck, William Henry.....	Mississippi.....	May 21, 1886
12	Taylor, Montgomery Meigs.....	At large.....	May 21, 1886
13	Ritter, Henry Snyder.....	Pennsylvania.....	May 21, 1886
14	Williams, George Washington.....	South Carolina.....	Sept. 28, 1886
15	Catlin, Albertus Wright.....	Minnesota.....	May 24, 1886
16	McVay, Charles Butler.....	Colorado.....	May 19, 1886
17	Vogelgraang, Charles Theodore.....	California.....	Sept. 6, 1886
18	Everhart, Lay Hampton.....	Alabama.....	May 20, 1886
19	Snow, William Alanson.....	Massachusetts.....	Sept. 6, 1886
20	Sullivan, Franklin Buchanan.....	At large.....	May 21, 1886
21	Bailey, Claude.....	Arkansas.....	Sept. 8, 1886
22	Neville, Wendell Cushing.....	Virginia.....	Sept. 12, 1886
23	Moore, Lawrence Henry.....	New York.....	Sept. 29, 1886
24	Davton, John Havens.....	At large.....	Sept. 12, 1886
25	Bestwick, Lucius Allyn.....	Massachusetts.....	Sept. 7, 1886
26	Bond, Charles Otis.....	Iowa.....	Sept. 8, 1886
27	Radford, Cyrus Sugg.....	Kentucky.....	May 21, 1886
28	Treadwell, Thomas Conrad.....	Massachusetts.....	May 21, 1886
29	Moffett, William Adger.....	South Carolina.....	Sept. 6, 1886
30	Latimer, Julius Lane.....	West Virginia.....	Sept. 29, 1886
31	Edie, John Rufus.....	At large.....	May 19, 1886

Class appointed in 1886, performing required

Order of general merit.	Class appointed in 1886, performing required		
	Name.	State.	Date of admission.
1	Holmes, Urban Tiger.....	Arkansas.....	Sept. 12, 1886
2	Price, Claude Bernard.....	Mississippi.....	June 2, 1886
3	Thomason, Thos. Eugene.....	do.....	May 21, 1886

service afloat.—Line division, 31 members.

Age at date of admission.		Order of merit.									Sea service in practice ships.		Order of general merit.
Years.	Months.	Seamanship, ship-building, and naval architecture.	Ordnance and gunnery.	Astronomy, navigation, and surveying.	Least squares and strength of materials.	Physics and chemistry.	Physiology and hygiene.	International law.	Discipline.	Number of demerits.	Months.	Days.	
16	6	2	2	2	2	2	2	3	11	20	6	29	1
15	6	1	1	1	1	1	1	5	7	13	6	29	2
16	2	4	4	3	3	5	4	9	26	72	6	29	3
17	4	3	8	5	7	3	6	22	4	7	6	29	4
17	8	7	7	9	5	4	14	17	21	39	4	12	5
16	7	5	3	7	6	8	23	17	9	17	6	29	6
17	1	13	6	4	25	5	20	4	8	20	6	12	7
16	6	14	9	13	14	9	6	8	23	52	6	29	8
15	5	25	17	8	4	10	17	28	17	51	6	29	9
17	9	10	14	11	9	7	12	10	10	20	6	29	10
17	7	17	16	21	17	11	3	15	4	5	6	29	11
16	7	6	15	25	22	21	9	13	20	49	6	29	12
16	3	8	10	9	20	11	10	16	1	0	6	29	13
17	1	19	27	12	18	29	26	13	27	70	4	12	14
17	5	14	5	6	15	19	8	12	24	77	6	29	15
17	7	22	12	16	31	26	18	7	2	3	3	29	16
17	7	21	28	24	28	18	5	10	3	7	4	12	17
16	5	10	19	14	13	30	31	30	15	22	6	29	18
16	7	23	21	23	23	14	13	6	6	6	4	12	19
14	10	12	12	15	10	13	10	19	30	142	5	29	20
15	10	29	25	17	15	19	26	27	18	45	4	12	21
16	11	17	11	17	29	16	16	21	13	22	4	12	22
16	2	27	23	20	8	27	23	2	31	125	4	12	23
17	11	16	18	19	11	15	22	19	24	57	4	12	24
16	6	9	20	28	11	24	21	26	27	56	4	12	25
15	9	28	25	25	20	22	14	25	16	25	3	4	26
17	11	26	21	30	27	17	28	28	14	21	6	29	27
16	11	30	30	28	24	23	19	23	22	47	6	29	28
16	10	19	29	25	29	28	25	1	29	82	4	12	29
17	11	24	23	21	18	25	29	24	11	19	4	12	30
15	7	30	31	31	26	31	30	31	19	45	4	14	31

service afloat.—Engineer division, 3 members.

Age at date of admission.		Order of merit.										Number of demerits.	Sea service in practice ships.		Order of general merit.
Years.	Months.	Naval construction.	Marine engines.	Designing machinery.	Fabrication.	Boilers.	Least squares and strength of materials.	Mechanics.	Chemistry and physics.	Physiology and hygiene.	Discipline.		Months.	Days.	
17	4	1	1	1	2	1	1	1	2	2	1	28	4	12	1
17	7	2	2	2	3	2	3	2	1	1	2	43	6	29	2
16	7	3	3	3	1	3	2	3	3	3	3	50	6	29	3

Relative standing of the First Class (52 members)

Order of annual merit.	Name.	State.	Date of admission
40	Allen, David Van Horn	Tennessee	Sept. 6, 1887
1	Althaus, Adalbert	Illinois	May 21, 1887
2	Arknay, Reginald Ewan	Arkansas	Sept. 5, 1887
10	Blosser, Henry Harnett	Kansas	Sept. 24, 1887
14	Blosser, Dr. Witt	Iowa	May 19, 1887
1	Blosser, Irving	Indiana	Sept. 6, 1887
30	Brown, William Daniel	Wisconsin	Sept. 6, 1887
24	C. C. Well, Harry Stanley	Illinois	Sept. 7, 1887
34	Cantabene, Francis	Pennsylvania	Mar. 24, 1887
8	Chambers, Horace Hannibal	Ohio	May 24, 1887
121	Chambers, Charles Earl	Illinois	May 19, 1887
16	Crow, Valdo	Kansas	Sept. 7, 1887
20	Crow, Robert	North Carolina	Sept. 7, 1887
1	Crow, William Howard	Iowa	Sept. 7, 1887
12	Crow, William Howard	Wisconsin	Sept. 6, 1887
1	Crow, Louis Herman	Illinois	May 19, 1887
17	Crow, William Howard	Iowa	Sept. 6, 1887
21	Crow, William Howard	Massachusetts	Sept. 6, 1887
10	Crow, William Howard	Ohio	Sept. 20, 1887
1	Crow, William Howard	Pennsylvania	May 20, 1887
12	Crow, William Howard	Wisconsin	Sept. 6, 1887
25	Crow, William Howard	Ohio	June 2, 1887
128	Crow, William Howard	Iowa	May 21, 1887
32	Crow, William Howard	Mississippi	Sept. 6, 1887
1	Crow, William Howard	Virginia	Sept. 5, 1887
20	Crow, William Howard	New York	Sept. 6, 1887
127	Crow, William Howard	Tennessee	May 20, 1887
27	Crow, William Howard	Pennsylvania	May 20, 1887
23	Crow, William Howard	Tennessee	May 21, 1887
26	Crow, William Howard	California	Sept. 6, 1887
1	Crow, William Howard	Georgia	Sept. 27, 1887
14	Crow, William Howard	Indiana	May 20, 1887
1	Crow, William Howard	Empire of Japan	May 21, 1887
11	Crow, William Howard	Ohio	May 20, 1887
1	Crow, William Howard	Maryland	Sept. 6, 1887
121	Crow, William Howard	Iowa	Sept. 5, 1887
25	Crow, William Howard	Ohio	Sept. 12, 1887
1	Crow, William Howard	Alabama	May 21, 1887
12	Crow, William Howard	Michigan	May 20, 1887
123	Crow, William Howard	Pennsylvania	Sept. 27, 1887
28	Crow, William Howard	South Carolina	May 19, 1887
29	Crow, William Howard	Wisconsin	Sept. 27, 1887
1	Crow, William Howard	Ohio	May 20, 1887

at the annual examination, June, 1890.

Age at date of admission.		Order of merit.									Sea service in practice ships.		Order of annual merit.
Years.	Months.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Discipline.	Number of demerits.	Months.	Days.	
17	3	40	42	45	34	39	31	48	45	73	5	12	40
18	0	14	31	18	47	20	36	17	21	28	7	27	†
16	3	15	5	8	12	8	3	8	14	21	5	12	7
17	6	18	26	14	18	26	33	19	9	14	3	24	19
15	4	7	3	41	3	3	22	27	16	17	7	27	*4
17	6	20	35	34	44	44	32	45	47	73	5	12	†
15	11	20	21	15	34	33	38	36	34	45	5	12	30
14	7	44	19	42	24	23	14	37	37	50	5	12	24
18	0	30	32	23	33	41	39	43	43	75	7	27	26
16	8	9	8	17	9	11	25	12	24	42	7	27	8
16	8	24	18	34	31	19	17	21	41	69	5	11	22
17	10	11	16	27	15	13	29	28	35	49	5	12	16
16	10	22	19	11	20	29	23	30	23	32	5	2	20
15	7	32	43	19	45	46	26	32	8	12	5	12	;
17	8	5	2	5	1	2	7	15	15	28	5	12	*2
16	2	25	45	37	29	42	47	51	38	44	7	13	†
17	0	27	14	10	16	17	36	19	10	9	5	12	17
16	8	34	29	29	34	29	1	11	20	34	5	12	28
18	0	16	9	3	5	16	40	18	22	41	4	28	10
16	3	33	28	1	46	36	30	5	30	37	7	24	†
16	4	6	11	8	11	14	15	10	27	32	5	12	12
16	7	39	24	47	21	22	41	38	32	38	7	27	25
17	8	42	38	46	27	38	45	43	48	79	5	5	38
17	1	25	40	11	26	34	34	26	17	13	3	24	32
17	1	49	48	37	49	47	49	47	36	42	1	6	§
14	8	48	39	49	34	23	27	40	51	63	4	28	39
17	7	37	25	30	31	32	19	24	31	41	2	20	27
17	11	29	47	33	34	45	34	39	6	17	7	27	37
18	0	20	34	34	34	43	2	39	42	68	4	3	33
16	8	36	33	15	34	36	13	3	5	10	5	7	26
16	8	a	a	51	a	a	a	a	a	38	2	20	¶
16	10	13	17	23	13	15	10	2	33	51	7	27	14
17	8	a	a	22	a	a	a	31	19	30	7	27	b
16	7	7	12	31	10	12	16	34	13	15	4	28	11
16	4	37	46	40	34	49	20	22	18	23	5	9	†
17	10	35	21	2	30	25	20	4	7	11	3	10	21
15	7	41	43	47	25	31	46	15	49	87	3	24	35
16	0	*46	*47	31	*47	50	48	46	39	48	6	12	§
16	6	3	10	27	7	7	4	28	12	25	5	5	6
16	8	28	7	13	8	9	43	1	44	70	2	20	13
15	5	18	36	50	17	26	41	50	29	37	7	27	28
15	9	23	27	52	18	28	18	42	50	118	1	32	29
17	5	45	40	7	42	35	50	7	28	32	7	27	34

Relative standing of the First Class (52 members)

Order of annual merit.	Name.	State.	Date of admission.
45 3	Smith, Henry Gerrish	Ohio	Sept. 5, 1887
18	Smith, Lucien Greathouse	Illinois	June 1, 1887
9	Stearns, Clark Daniel	Michigan	Sept. 5, 1887
31	Sypher, Jay Hale	Arizona	Sept. 5, 1887
1	Theall, Elisha	New York	May 28, 1887
75	Watt, Richard Morgan	Pennsylvania	Sept. 22, 1887
15	Willard, Arthur Lee	Missouri	Sept. 7, 1887
1	Williams, Dion	Ohio	July 18, 1887
1	Zahn, Frank Baker	Pennsylvania	Sept. 5, 1887

b Deficient; continued with class.

at the annual examination, June, 1890—Continued.

Age at date of admission.		Order of merit.								Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Discipline.		Months.	Days.	
17	5	2	4	23	2	4	5	13	1	7	5	12	*3
17	6	16	23	19	22	17	11	25	11	16	7	27	18
17	8	12	15	4	18	9	8	14	3	9	5	12	9
16	6	45	29	23	27	26	24	34	46	70	5	12	31
14	5	43	48	44	42	48	44	32	40	54	7	27	†
15	3	4	6	37	6	5	11	9	1	3	5	12	*5
17	7	10	18	19	23	6	8	39	26	20	3	24	15
17	5	47	37	42	48	40	27	23	25	34	5	2	†
16	3	1	1	6	4	1	6	6	4	14	5	12	*1

Relative standing of the second class (54 members)

Order of annual merit.	Name.	State.	Date of admission.
1	Allen, Charles	Ohio	Mar. 15, 1888
23	Arison, Edgar Emmett	Pennsylvania	May 18, 1888
25	Ball, Walter	New York	Sept. 6, 1888
44	Bannon, Phillip Michael	Maryland	May 21, 1888
41	Beuret, John Dougal	Ohio	Sept. 7, 1888
44	Blakely, John Russell Young	Pennsylvania	Sept. 29, 1888
24	Borden, Thomas Sheppard	Louisiana	Sept. 25, 1888
1	Breckinridge, Joseph Cabell	Kentucky	Sept. 5, 1888
8	Campbell, Joseph Randolph	Wyoming	Sept. 29, 1888
24	Crank, Robert Kyle	Texas	Sept. 6, 1888
29	Davis, Austin Rockwell	Georgia	May 21, 1888
9	Davison, Gregory Caldwell	Missouri	May 22, 1888
46	Dawson, William Charles	Missouri	Sept. 6, 1888
7	Day, George Calvin	Vermont	May 19, 1888
45	Dennett, Stanley Pullen	Maine	May 19, 1888
12	Evans, Holden A.	Florida	Sept. 3, 1888
43	Ferguson, Homer Lenoir	North Carolina	May 21, 1888
22	Gamble, Aaron Lichtenberger	Indiana	Sept. 5, 1888
44	Gibbs, Washington Dorsey	Mississippi	May 18, 1888
30	Hasbrouck, Raymond De Lancy	Idaho Territory	Sept. 25, 1888
23	Hines, John Fore	Kentucky	May 21, 1888
18	Hoblitzell, William Edward	Missouri	Sept. 6, 1888
12	Huntington, Howard Williams	Pennsylvania	May 19, 1888
11	Hussey, Charles Lincoln	New Hampshire	May 21, 1888
10	Jewell, Charles Theodore	At large	May 19, 1887
1	Jones, Beriah Elwood	Pennsylvania	May 19, 1888
41	Kellogg, Edward Stanley	New York	Sept. 5, 1888
22	Low, Theodore Henry	Connecticut	May 18, 1888
42	Marklin, Charles Fearn	New York	Sept. 25, 1888
40	Mallison, George	North Carolina	May 21, 1888
21	Mather, George Herbert	New Jersey	May 22, 1888
1	McCormick, Benjamin Bernard	New York	May 19, 1888
42	McDonald, Joseph Eschiel	Illinois	Sept. 7, 1888
45	McNamee, Luke	Kansas	Sept. 6, 1888
27	Moore, Stanford Elwood	Georgia	Sept. 6, 1888
28	Payne, Fred Bonnaville	New York	May 21, 1888
42	Pollard, Charles Teed, Jr.	Texas	Sept. 25, 1888
20	Pollock, Emmett Riddle	Illinois	May 18, 1888
17	Porter, John Singleton	Tennessee	Sept. 25, 1888
24	Pringle, Joel Roberts Polnart	Illinois	Sept. 6, 1888
21	Rice, Arthur	Indiana	Sept. 7, 1888
1	Rudney, Warren	Texas	Sept. 6, 1888
1	Russell, John Henry, Jr.	At large	May 18, 1888
8	Sawyer, Frederick Lewis	Illinois	Sept. 6, 1888
	Sawyer, Josiah Grigg	Illinois	May 19, 1888

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at the annual examination, June, 1890.

Age at date of admission.		Order of merit.						Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		Months.	Days.	
17	11	40	49	37	40	6	34	72	4	17	†
15	2	35	34	42	9	41	36	82	4	17	33
16	1	17	15	38	35	30	47	148	1	27	25
16	2	40	44	39	53	30	28	54	4	17	44
17	7	1	1	2	3	1	24	49	1	27	*1
16	2	3	4	30	8	3	46	138	1	27	*4
16	6	39	29	13	14	29	32	71	1	27	24
16	6	43	53	27	32	53	39	83	1	27	†
16	6	12	2	12	16	5	23	53	1	27	8
16	8	44	30	19	12	32	49	179	1	27	34
16	9	26	16	40	30	12	50	158	4	17	29
17	0	6	8	8	32	15	16	28	4	17	9
17	5	9	12	1	1	28	27	51	1	27	6
16	6	8	5	6	28	13	14	32	4	17	7
15	11	46	46	52	44	45	8	33	4	17	45
16	9	13	21	5	18	39	19	9	1	27	12
15	2	4	7	4	2	16	25	51	4	17	*3
15	10	31	30	28	27	40	43	90	1	27	32
16	3	33	35	51	40	54	52	208	4	17	46
17	2	29	28	49	46	18	51	195	1	27	39
17	7	23	23	32	48	11	1	11	4	17	23
17	1	15	35	36	38	2	10	29	1	27	18
15	9	13	20	16	36	7	4	25	4	17	13
17	3	10	14	10	30	25	4	19	4	17	11
15	2	5	11	7	25	19	40	91	4	12	10
17	4	52	52	47	52	38	37	79	1	27	‡
17	11	38	40	50	54	21	12	25	0	19	41
17	8	28	18	8	26	22	42	90	4	17	22
17	5	22	41	54	43	49	44	97	1	27	42
17	4	36	17	48	45	49	35	75	4	17	40
15	1	24	27	34	47	41	29	62	4	17	31
15	3	52	50	14	13	13	13	34	4	17	†
16	6	2	6	14	19	9	2	16	1	27	*2
17	5	7	10	3	9	10	21	42	1	27	*5
16	0	45	38	24	17	19	15	33	1	27	27
16	9	16	18	26	29	33	54	250	4	17	28
16	0	46	33	42	22	52	38	79	1	27	r43
15	5	21	37	23	5	37	26	51	4	17	20
15	8	11	9	22	36	25	47	149	1	27	17
15	7	41	43	35	7	47	29	76	1	27	36
17	3	33	42	18	22	4	10	25	1	27	21
17	1	54	50	46	49	51	33	72	1	27	†
15	6	31	47	40	51	36	20	35	2	20	†
17	4	30	3	10	21	22	9	28	1	27	
16	11	48	48	53	50	25	7	21	4	17	

Relative standing of the second class (54 members)

Order of annual merit.			
	Name.	State.	Date of admission.
19	Sheehan, James.....	New York.....	May 21, 1884
25	Stirling, Yates, jr.....	Massachusetts.....	Sept. 6, 1884
26	Stitt, Thomas Lutz.....	Indiana.....	Sept. 5, 1884
27	Stopford, Frederick William.....	Massachusetts.....	May 19, 1884
30	Symington, Powers.....	West Virginia.....	Sept. 7, 1884
16	Thompson, Leon Seymour.....	Ohio.....	May 21, 1884
14	Trant, Frederick Augustus.....	Connecticut.....	May 12, 1884
7	Wedekind, George.....	New York.....	Sept. 5, 1884
28	Zillman, Christian Charles Herman.....	Missouri.....	Sept. 27, 1884

at the annual examination, June, 1890.—Continued.

Age at date of admission.		Order of merit.							Sea service in practice ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Number of demerits.	Months.	Days.	
15	8	19	38	32	15	7	31	65	4	17	19
16	4	19	22	45	40	46	45	124	0	38	35
15	1	37	32	21	80	35	6	10	1	27	26
15	7	25	24	31	24	44	53	250	4	17	37
15	11	41	25	20	6	48	41	90	1	27	30
14	0	17	25	28	9	33	2	18	4	17	16
16	11	26	13	24	4	16	17	37	4	17	14
16	6	51	53	42	38	24	18	44	1	27	21
17	8	49	44	17	34	43	22	35	1	27	38

Relative standing of the Third Class (72 members)

Order of annual merit.	Name.	State.	Date of admission.
53	Asbury, Louis George, Jr	Louisiana.....	Sept. 7, 1889
48	Bagley, Worth	North Carolina	Sept. 5, 1889
58	Baird, Lewis Conway	Indiana.....	Sept. 6, 1889
7	Bennett, Ernest Linwood	Massachusetts.....	Sept. 24, 1889
28	Berry, David Mark.....	California	Sept. 6, 1889
61	Bisset, Eugene Leo	Kentucky	Oct. 2, 1889
20	Brady, John Richard.....	Pennsylvania.....	Sept. 6, 1889
23	Campbell, Edward Hale.....	Indiana.....	Sept. 6, 1889
54	Carver, Marvin	Minnesota	Sept. 27, 1889
22	Chadwick, Frank Laird	Minnesota	May 18, 1889
68	Clark, Frank Hodges, Jr	Rhode Island.....	Sept. 5, 1889
P	Cobb, John Addison, Jr.....	Georgia.....	May 22, 1889
32	Coleman, James Samuel.....	Alabama	Sept. 5, 1889
24	Cook, Allen Merriam.....	Kansas	May 22, 1889
33	Crocker, John Archdell	Pennsylvania.....	May 22, 1889
17	Crosley, Walter Selwyn	Connecticut	Sept. 9, 1889
261	Cruise, Andrew Jackson, Jr.....	Pennsylvania.....	May 18, 1889
7	Dalley, Harry Logan.....	Texas	Sept. 7, 1889
21	Doddridge, John Sehon	West Virginia.....	Sept. 7, 1889
35	Douglas, Richard Spencer	Georgia.....	June 2, 1889
63	Elder, Edward Avery.....	Massachusetts.....	May 21, 1889
13	Feld, Hubbard Moylan	Virginia	May 20, 1889
55	Fewell, Christopher Catron	Texas	Oct. 2, 1889
15	Fitch, Claude James	Illinois	Sept. 7, 1889
19	Giss, William Kern	Illinois	June 16, 1889
42	Groesbeck, William Gerard	Ohio.....	Sept. 5, 1889
69	Groff, Joseph Coblentz.....	Maryland	Oct. 2, 1889
31	Hains, Peter Connor, Jr	District of Columbia.....	May 18, 1889
44	Hoblinger, Gerald Long	Kansas	Oct. 2, 1889
25	Hooker, James Clifton	Tennessee	Sept. 7, 1889
28	Jackson, Orton Porter	Pennsylvania.....	May 18, 1889
9	James, Leland Frierson	South Carolina.....	Sept. 8, 1889
6	Johnson Moulton Kinsinger.....	Ohio.....	June 10, 1889
1	Jones, Lewis Benson	New York	May 21, 1889
11	Kellogg Thomas Steele	At large	Oct. 19, 1889
12	Lang, Charles Jonas	Pennsylvania.....	Sept. 6, 1889
43	Logan, William Vance.....	Indiana	June 26, 1889
64	Magill, Louis John	Pennsylvania	Nov. 11, 1889
1	Manton, Walter James	Louisiana.....	May 21, 1889
50	McKethan Alfred Augustus	North Carolina	Sept. 8, 1889
14	Montgomery, William Slack	Kentucky	Sept. 3, 1889
70	Morris, John Ramsey	Missouri.....	Sept. 7, 1889
18	Nutting, Daniel Chapin, Jr.....	Kansas	May 21, 1889
27	Ormstead Percy Napier.....	Oregon	May 21, 1889
62	Parker, Thomas Drayton	South Carolina.....	Oct. 2, 1889
52	Pearson, Henry Allen	Utah	Sept. 6, 1889
24	Perry, Joseph Albert	Illinois	Sept. 6, 1889

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at the annual examination, June, 1890.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline.		Months.	Days.	
16	10	58	60	20	52	58	2	22	53
15	5	46	49	25	51	50	2	22	46
18	2	60	44	58	63	122	2	12	56
17	10	a	a	a	a	1	0	0	7
17	7	40	33	41	2	0	2	22	36
18	1	1	1	6	25	30	2	22	*1
16	11	30	28	30	64	127	2	22	30
16	11	46	8	36	28	30	2	22	23
18	5	41	49	66	36	29	2	22	56
17	2	19	20	34	34	67	4	19	22
17	9	12	6	17	6	16	2	22	*8
16	3	a	a	a	a	73	1	27	P
16	3	61	24	23	28	33	2	22	32
18	8	15	18	39	49	43	4	14	24
17	3	27	31	43	24	33	4	19	33
17	10	38	9	30	3	15	2	22	17
16	4	62	47	57	66	192	4	19	61
18	4	a	a	a	a	129	0	0	7
17	1	8	13	48	31	34	2	22	21
17	10	25	38	29	55	73	4	19	35
16	9	4	5	8	44	35	4	19	*3
18	0	6	12	19	56	74	4	19	13
15	11	59	43	63	43	48	2	22	55
17	0	30	15	16	28	26	2	22	15
18	0	5	31	24	20	29	4	19	19
15	0	50	54	15	61	114	2	22	42
19	4	21	10	7	12	16	2	22	*9
17	4	30	42	24	41	30	4	19	31
19	3	39	37	56	36	35	2	22	44
18	1	25	46	10	5	16	2	22	25
15	9	10	26	40	50	59	4	19	28
17	0	a	a	a	a	30	0	0	7
19	6	a	a	a	a	85	0	0	7
16	6	64	65	51	42	42	4	14	†
18	2	10	19	12	36	50	2	22	11
19	10	12	15	14	45	46	2	22	12
17	5	49	36	38	45	38	4	19	43
18	9	15	7	2	21	35	2	22	*4
16	5	53	62	26	60	129	1	27	5
17	10	51	33	54	21	22	2	22	50
16	1	23	3	45	18	18	2	22	14
19	3	53	22	45	52	49	2	22	39
19	9	9	21	27	8	16	4	19	13
17	10	28	23	32	21	13	1	27	27
18	2	1	10	3	13	20	2	22	*2
19	8	42	54	60	4	13	2	22	
15	10	63	38	60	6	8	2	22	

Relative standing of the Third

Order of annual merit.	Relative standing of the Third		
	Name.	State.	Date of admission.
36	Pouget, Maurice Berthold	Missouri.....	Sept. 7, 1889
37	Potter, James Boyd	New Jersey.....	Sept. 8, 1889
10	Powell, William Glasgow	New Jersey.....	May 18, 1889
37	Powelson, Wilfrid Van Nest.....	New York	Sept. 8, 1889
39	Pratt, Alfred Allen	Illinois	Sept. 7, 1889
9	Price, Henry Bertrand	Iowa	May 20, 1889
41	Procter, Andre Morton	Kentucky	Sept. 8, 1889
7	Randolph, William Browne	New York	May 20, 1889
34	Read Frank De Witt	Ohio.....	Sept. 8, 1889
36	Ryan, George Whitehouse	Massachusetts.....	Sept. 8, 1889
16	Ryan, John Paul Joseph	New York	May 22, 1889
48	Scott, Guy Terrell	Nebraska.....	Sept. 7, 1889
37	Shaw, Graham	Pennsylvania.....	Sept. 7, 1889
51	Stearns, Edward Cheever	Ohio.....	May 21, 1889
45	Sticht, John Low	New York	Sept. 7, 1889
46	Sturdevant, Richard	Pennsylvania.....	Sept. 8, 1889
1	Townsend, Arthur Critchlow	Pennsylvania.....	May 22, 1889
40	Trench, Martin Edward	Minnesota.....	Oct. 3, 1889
38	Upham, Frank Brooks	Montana.....	Sept. 8, 1889
20	Valentine, William Stanley	New York	May 20, 1889
35	Ward, Henry Heber	New Jersey.....	Sept. 7, 1889
26	Wells, Chester	Pennsylvania.....	Nov. 15, 1889
49	Whitman, Walter Bloomfield	Texas	May 20, 1889
29	Wilson, Thomas Sheldon	Illinois	May 20, 1889
60	Wishart, William Clifton	North Carolina.....	May 20, 1889

Class, etc.—Continued.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ship.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline.		Months.	Days.	
18	7	1	40	1	1	14	2	22	*6
16	8	56	56	52	57	85	2	22	57
17	8	34	17	4	36	48	2	22	10
17	0	12	2	13	40	30	2	22	*7
16	2	51	59	64	54	49	2	22	59
19	11	28	63	36	8	9	4	14	†
16	2	53	14	48	62	109	2	22	41
17	9	a	a	a	a	4	4	19	r
19	2	20	56	20	45	40	2	22	34
18	3	64	64	28	16	11	0	0	rb
19	9	22	20	10	19	22	2	22	16
16	8	44	48	41	48	33	2	22	48
15	8	33	45	20	65	167	2	22	r37
17	8	36	51	54	16	20	4	19	51
16	5	45	29	60	57	74	2	22	45
17	7	23	53	59	14	10	2	22	46
17	0	56	66	65	27	28	4	14	;
19	10	42	33	44	31	45	2	22	40
17	0	48	41	32	14	19	2	22	38
16	11	15	58	5	8	22	4	19	20
18	3	15	4	9	25	38	2	22	*5
19	1	34	26	18	59	90	0	0	26
18	6	37	51	52	8	3	4	19	49
18	1	7	26	48	31	35	4	19	29
17	10	66	61	47	34	41	4	19	60

Fourth Class—81 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea service practice at date of admission.	
			Years.	Months.	Months.	Days.
Adams, Lawrence Howell	Pennsylvania	Sept. 26, 1890	16	7		
Andrews, Claude Norton	Iowa	Sept. 8, 1890	16	6		
Babin, Provost	New York	Sept. 6, 1890	18	0		
Baker, Henry Thomas	Ohio	Oct. 7, 1890	16	4		
Balwin, Murray	Texas	Sept. 27, 1890	17	11		
Batts, Edward Lee	Texas	May 22, 1890	17	11		
Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1890	17	10		
Berryman John Russell	Ohio	May 22, 1890	17	11		
Bivins, Robert Francis	North Carolina	Sept. 27, 1890	16	9		
Blamly, Edwin Chauncey	Pennsylvania	May 20, 1890	17	8		
Bookwalter, Charles Sumner	Illinois	Sept. 8, 1890	16	10		
Bulmer, Roscoe Carlyle	Nevada	Sept. 26, 1890	15	11		
Chappell, Ralph Hubert	Michigan	May 22, 1890	18	11		
Chester, Arthur Tremain	At Large	May 19, 1890	15	0		
Churchill, Winston	Missouri	May 21, 1890	18	6		
Cone, Hitch Ingham	Florida	Sept. 5, 1890	19	4		
Cooper, Ignatius Taylor	Delaware	May 20, 1890	17	11		
Cox, Daniel Hargate	New York	Sept. 9, 1890	17	6		
Craven, Thomas Tingey	Tennessee	Sept. 27, 1890	17	2		
Crosby Benjamin Gratz	At Large	Sept. 26, 1890	18	8		
Daley Harry Logan	Texas	Sept. 7, 1890	18	4		
De Jarnette Jas. Daniel Coleman	Virginia	Sept. 8, 1890	17	0		
De Kay, Eclford Craven	New York	Sept. 26, 1890	17	3		
De Lany, Edwin Hayden	Tennessee	May 21, 1890	19	2		
Emery Arthur Ballard	New Hampshire	May 22, 1890	17	7		
England Clarence	Arkansas	Sept. 5, 1890	18	2		
Follenwider, Simon Peter	Missouri	May 21, 1890	18	9		
Galbraith, Gilbert Smith	Pennsylvania	Sept. 8, 1890	18	8		
Gelm, George Earl	New York	May 22, 1890	19	7		
Gillis, Irvin Van Gorder	New York	Sept. 6, 1890	15	6		
Graham Stephen Victor	Michigan	May 19, 1890	16	2		
Greer, George Tate	Virginia	May 20, 1890	18	5		
Griffith Claude Willis	Maryland	Sept. 8, 1890	17	11		
Hanks Alfred Walton	Alabama	Sept. 6, 1890	16	1		
Hack Herman Whitelaw	Kansas	Sept. 8, 1890	19	6		
Hodgins John Melton	Virginia	Sept. 8, 1890	18	10		
Hull Alexander Thomas	Virginia	May 21, 1890	15	5		
Isard Walter Blake	South Carolina	Sept. 10, 1890	17	4		
James Leland Freeman	South Carolina	Sept. 9, 1890	17	0		
Johnson Melton Kinsinger	Ohio	June 10, 1890	19	6		
Jones Lewis Horton	New York	May 21, 1890	17	8		
Kavanaugh Arthur Clynne	Nebraska	May 20, 1890	19	4		
Kress Frederick Charles	Pennsylvania	Sept. 6, 1890	18	2		
La Bach Paul Mayer	North Dakota	Sept. 26, 1890	18	0		
Lane Charles Arthur	Missouri	May 20, 1890	19	2		
Luby John McClane	Texas	Sept. 8, 1890	16	4		
Lyon Frank	Kentucky	May 20, 1890	16	1		
Mason Walter James	Louisiana	Sept. 6, 1890	17	0		
Mann George Hiram	Pennsylvania	Sept. 6, 1890	16	4		
McAvoy Isaac and Benjamin	New Jersey	Sept. 6, 1890	17	7		
McCormack Michael James	Michigan	May 22, 1890	16	7		

Fourth Class—81 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
McLean, Ridley.....	Tennessee.....	May 20, 1890	17	6		
McMorris, Boling Kavanaugh...	Alabama.....	Sept. 15, 1890	18	6		
McNeely, Robert Whitehead ...	North Carolina	Sept. 8, 1890	17	1		
Moody, Roscoe Charles	Maine.....	Sept. 8, 1890	17	6		
Osborn, Robert Hatfield	New York.....	May 23, 1890	16	6		
Perkins, Frederick King.....	California.....	June 11, 1890	17	6		
Reeves, Joseph Mason.....	Illinois.....	Sept. 8, 1890	17	10		
Ridgely, Randolph, jr	Georgia.....	May 21, 1890	18	8		
Robert, William Pierre	Mississippi.....	May 20, 1890	16	10		
Roberts, Thomas Gaines.....	Alabama.....	May 27, 1890	19	9		
Ryan, George Whitehouse.....	Massachusetts.....	June 12, 1890	18	10	1	27
Sandoz, Fritz Louis.....	Louisiana.....	May 19, 1890	18	3		
Scott, William Pitt	Pennsylvania.....	May 20, 1890	16	11		
Sellers, David Foote	New Mexico.....	May 21, 1890	16	4		
Shaw, Melville Jones	Minnesota.....	Sept. 6, 1890	18	1		
Snow, Carlton Farwell.....	Maine.....	May 19, 1890	16	2		
Spear, Roscoe.....	Pennsylvania.....	May 23, 1890	18	4		
Stone, George Loring Porter.....	Georgia.....	Sept. 26, 1890	15	2		
Stone, Raymond	Alabama.....	Sept. 5, 1890	17	1		
Talcott, Arthur Jewell	Rhode Island	May 21, 1890	17	5		
Tolfree, Herbert Myron.....	New York.....	May 21, 1890	16	7		
Tompkins, John Thomas	Louisiana.....	Sept. 6, 1890	19	11		
Towne, Arthur Ellsha	South Dakota	Sept. 26, 1890	19	8		
Turpie, Walter Stevens.....	Maryland.....	May 22, 1890	15	8		
Walker, Henry Mallory.....	South Dakota.....	Sept. 8, 1890	19	6		
Watson, Edward Howe	Kentucky	Sept. 26, 1890	16	7		
Webster, Charles	Massachusetts.....	Sept. 6, 1890	16	8		
Whitted, William Scott.....	North Carolina	May 20, 1890	19	10		
Winn, Philip Bird	Kentucky	Sept. 12, 1890	19	4		
Winship, Emory.....	Georgia.....	June 3, 1890	18	3		

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

December 13, 1890.

	Members.
First class	48
Second class	51
Third class	61
Fourth class	81
Total.....	241

ERRATUM.

Page 85. Turpie, should read Turpin.

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS

November 23, 1889, to December 13, 1890.

APPOINTED ENSIGNS.

Naval Cadet Frank Marble	Class of 1891
Naval Cadet Ashley Herman Robertson	Class of 1891
Naval Cadet Carlo Bonaparte Brittain	Class of 1891
Naval Cadet Casey Bruce Morgan	Class of 1891
Naval Cadet William Michael Crose	Class of 1891
Naval Cadet John Flavel Hubbard	Class of 1891
Naval Cadet Delworth Wilson Beswick	Class of 1891
Naval Cadet Marcus Lyon Miller	Class of 1891
Naval Cadet Lloyd H. Chandler	Class of 1891
Naval Cadet George North Hayward	Class of 1891
Naval Cadet Samuel Shelburn Robison	Class of 1891
Naval Cadet Henry Kennedy Benham	Class of 1891
Naval Cadet Charles Frederick Hughes	Class of 1891
Naval Cadet Albert Leland Norton	Class of 1891
Naval Cadet James Henry Reid	Class of 1891
Naval Cadet William Buell Franklin	Class of 1891
Naval Cadet Henry Arnosto Wiley	Class of 1891
Naval Cadet Frederick Brewster Bassett, jr.	Class of 1891
Naval Cadet Herbert Grenville Gates	Class of 1891

APPOINTED ASSISTANT ENGINEERS.

Naval Cadet Armin Hartrath	Class of 1891
Naval Cadet Oscar William Koester	Class of 1891
Naval Cadet Edward Latimer Beach	Class of 1891
Naval Cadet Herman Osman Stickney	Class of 1891

APPOINTED ASSISTANT NAVAL CONSTRUCTOR.

Naval Cadet William Newton Vausant	Class of 1891
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APPOINTED SECOND LIEUTENANTS U. S. MARINE CORPS

Naval Cadet John Archer Lejeune	Class of 1891
Naval Cadet Clarence Louis Adrian Ingate	Class of 1891
Naval Cadet Leroy Augustus St. Cloud	Class of 1891
Naval Cadet Eli Kelley Cole	Class of 1891
Naval Cadet Theodore Porter Kane	Class of 1891

RESIGNED.

Naval Cadet Edward Ernest West, class of 1888 <i>s</i>	May 6, 1889
Naval Cadet Walter James Manion, fourth class <i>s</i>	May 13, 1889
Naval Cadet George Tate Greer, fourth class	Jan. 22, 1890
Naval Cadet Ralph Collins Chadbourne, second class.....	Jan. 23, 1890
Naval Cadet Thomas Holdup Stevens Vail, fourth class.....	Jan. 29, 1890
Naval Cadet Edward Price Smith, fourth class.....	Feb. 8, 1890
Naval Cadet John Curlett, third class	Feb. 14, 1890
Naval Cadet Leonard Goodwin, third class.....	Feb. 14, 1890
Naval Cadet Joseph Coolidge Kilbourne, third class.....	Feb. 14, 1890
Naval Cadet Robert Abercrombie French, fourth class.....	Feb. 14, 1890
Naval Cadet John Russell Berryman, fourth class.....	Feb. 14, 1890
Naval Cadet Gordon Hood, fourth class.....	Feb. 14, 1890
Naval Cadet John Randolph Johnson, fourth class.....	Feb. 14, 1890
Naval Cadet Samuel Granger Latta, fourth class.....	Feb. 14, 1890
Naval Cadet Charles Fergus Neill, fourth class.....	Feb. 14, 1890
Naval Cadet Archibald Anthon, second class.....	Feb. 15, 1890
Naval Cadet Randolph Ridgely, jr., third class.....	Feb. 15, 1890
Naval Cadet Rozier Bonaparte Larkin, third class.....	Feb. 17, 1890
Naval Cadet Charles Arthur Lane, fourth class.....	Feb. 17, 1890
Naval Cadet Edgar Richmond, fourth class	Feb. 17, 1890
Naval Cadet Eugene Dewey Ryan, second class	Feb. 18, 1890
Naval Cadet Claude Norton Andrews, fourth class.....	Feb. 18, 1890
Naval Cadet William Walker Beck, second class	Feb. 20, 1890
Naval Cadet Frederick Lloyd Eaton, second class	Feb. 20, 1890
Naval Cadet Edward Trickle, second class	Feb. 21, 1890
Naval Cadet William Turner Saunders, second class.....	Feb. 24, 1890
Naval Cadet Franklin Sidney Rising, first class.....	Feb. 28, 1890
Naval Cadet William Alfred Baehr, fourth class	Mar. 4, 1890
Naval Cadet Joseph Duvail Eberle, fourth class.....	Mar. 17, 1890
Naval Cadet Emory Winship, fourth class.....	Mar. 18, 1890
Naval Cadet Frederick King Perkins, fourth class.....	May 17, 1890
Naval Cadet Raymond Belt Swigart, third class.....	May 20, 1890
Naval Cadet John Addison Cobb, jr., fourth class	June 3, 1890
Naval Cadet George Whitehouse Ryan, fourth class.....	June 9, 1890
Naval Cadet Walter James Manion, fourth class.....	June 19, 1890
Naval Cadet Charles William Lyle, second class.....	June 20, 1890
Naval Cadet William Newton Vansant, class appointed 1884 <i>t</i>	June 30, 1890
Naval Cadet Graham Shaw, third class.....	Sept. 20, 1890
Naval Cadet William Browne Randolph fourth class	Sept. 30, 1890
Naval Cadet Josiah Grigg Sawyer, second class	Oct. 4, 1890
Naval Cadet George Wedekind, third class.....	Oct. 8, 1890
Naval Cadet Charles Teed Pollard, jr., second class	Oct. 22, 1890
Naval Cadet William Howland Ford, first class	Nov. 15, 1890
Naval Cadet Roby Robinson, first class.....	Nov. 15, 1890
Naval Cadet Beriah Ellwood Jones, second class.....	Nov. 15, 1890
Naval Cadet Arthur Critchlow Townsend, third class	Nov. 15, 1890

s Omitted in register of last year.

t Appointed assistant naval constructor July 1, 1890.

DISMISSED.

Naval Cadet Thomas Leoline Jenkins, fourth class Mar. 1. 1885
Naval Cadet Andrew Jackson Cruce, jr., third class Oct. 22. 1885

DIED.

Naval Cadet George William Kirk, class appointed 1885 * Nov. 17. 1885

* Drowned.

MERIT-ROLLS FOR 1889-'90.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 75, showing the relative weight of the different branches, are used as co-efficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls." (Regulations U. S. Naval Academy, § 191.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for engineer division.

r Resigned.

Merit roll of the graduating class of naval cadets at the conclusion of the six years' course, June, 1890.

NAME.	Examinations										ASSIGNMENT
	Sea and ship and naval tactics	Fortification and gunnery	Navigation	Steam-engineering	Modern languages	English literature, history, political economy, and other subjects	Aggregate for final examination	Aggregate for four years	Final aggregate		
Maxima	56	44	44	44	44	24	240	760	1000		
1. Mariide Frank	44 52	41 00	37 71	40 37	23 87	22 92	211 10	670 27	641 37	Ensign.	
2. Robertson Ashby Herman	41 34	34 65	36 61	37 14	23 31	20 40	193 71	622 92	614 63	Ensign.	
3. Britton Carlo Bonaparte	45 76	39 60	37 73	40 41	21 63	21 12	206 23	609 34	615 63	Ensign.	
4. Morgan Cassy Linne	41 46	36 97	34 54	37 29	20 72	21 00	191 34	604 49	640 27	Ensign.	
5. Croser William Michael	41 44	35 63	37 07	38 06	21 24	21 44	197 10	592 39	749 49	Ensign	
6. Lejeune John Archer	45 22	34 94	39 34	34 17	24 01	21 00	203 30	643 45	747 21	Second lieutenant, Marine Corps.	
7. Hubbard John Flavel	43 54	39 71	36 41	37 73	21 37	20 44	201 04	545 33	746 97	Ensign.	
8. Henwick Delworth Wilson	42 30	34 54	39 40	38 94	21 42	20 42	197 77	546 46	744 23	Ensign	
9. Muller Marcus Lavon	44 52	39 00	34 65	39 59	23 54	21 30	193 24	540 54	783 42	Ensign	
10. O'andler Lloyd Horwitz	47 18	31 57	33 66	40 70	23 10	19 38	195 59	540 55	776 14	Ensign	
11. Hartnath Armin	37 52	33 44	32 34	36 04	30 92	19 02	195 76	577 30	773 12	Assistant engineer	
12. Koster Oscar William	43 26	30 61	31 64	35 07	14 20	20 54	143 64	540 40	772 74	Assistant engineer	
13. Hayward George North	39 80	29 92	31 57	37 05	21 21	20 70	141 25	540 40	771 14	Ensign.	
14. Ingate Clarence Louis Austin	40 32	34 76	34 17	35 75	24 15	22 32	195 47	575 09	770 56	Second lieutenant, Marine Corps.	
15. Robson Samuel Shelburn	40 32	30 25	35 75	32 12	19 60	19 62	177 66	582 04	759 70	Ensign.	
16. Benham Henry Kennedy	33 70	34 94	30 91	37 14	19 25	21 42	143 40	578 41	756 81	Ensign.	
17. Hughes Charles Frederic	44 40	27 43	31 46	34 43	17 57	20 44	181 37	565 04	747 31	Ensign.	
18. Norton Albert Leland	45 22	29 04	34 47	34 32	17 64	22 62	143 71	540 87	744 54	Ensign.	
19. Stafford Leroy Augustus	41 20	35 11	32 78	34 32	18 69	22 20	144 60	550 43	744 43	Second lieutenant, Marine Corps	
20. Cole Eli Keller	42 64	35 42	34 72	34 87	17 71	21 00	191 40	546 91	734 31	Second lieutenant, Marine Corps.	
21. Reed James Henry	36 64	34 43	33 77	41 57	19 41	20 44	146 40	437 24	722 04	Ensign.	
22. Franklin William Bell	40 60	34 54	32 40	35 46	20 40	20 74	145 03	534 03	719 06	Ensign	

23	Beach, Edward Latimer.....	39.20	33.99	33.55	32.63	20.72	21.00	186.52	525.03	711.55	Assistant engineer.
24	Stickney, Herman Osman	39.34	27.50	36.63	28.27	24.54	16.68	172.96	532.00	704.96	Assistant engineer.
25	Wiley, Henry Ariosto.....	39.62	33.33	28.93	31.68	20.09	22.92	176.57	510.02	686.59	Ensign.
26	Bassett, Frederick Brewster, jr.....	36.96	27.94	27.83	30.58	19.81	20.82	163.94	519.28	643.22	Ensign.
27	Kane, Theodore Porter.....	39.62	30.36	27.61	35.75	19.95	20.28	173.57	509.11	682.08	Second lieutenant, Marine Corps.
28	Gates, Herbert Grenville.....	37.24	31.57	27.61	30.25	17.50	20.28	164.45	517.64	682.09	Ensign.

Merit roll of the naval cadets of the class appointed in 1885—Annual examination, June, 1889.

NAME.	Seamanship, ship building, and naval architecture		Seamanship, practical		(Trade and end of day)		Astronomy, navigation, and surveying		Navigation, practical		Practical instruction in steam engine, and use of the screw propeller		Least square and solution of triangles		Physical measurements		Physiology and hygiene		Conduct.		Average for fourth year.		Average for third year.		Average for second year.		Average for first year.		General average for four years.	
	64	20	12	52	12	6	20	20	12	53	6	6	20	20	20	12	20	204	224	152	76	760								
1. Richmond P. Hubert	67.56	17.45	60.42	44.94	10.53	6.60	18.05	18.05	10.56	18.80	196.23	134.75	64.25	073.63																
2. George H. Rock	60.52	17.75	66.24	46.28	10.56	7.00	17.85	18.15	9.15	19.07	192.76	137.63	68.45	671.41																
3. Arthur B. Hoff	54.31	17.80	62.24	43.03	10.05	5.70	17.45	17.25	10.32	19.20	187.04	139.07	72.05	660.75																
4. Nathan C. Twining	59.61	16.85	60.90	41.46	9.92	6.50	16.15	16.10	9.75	16.53	180.49	133.18	68.15	642.46																
5. Benjamin F. Hutchison	53.38	16.65	59.22	44.07	10.53	6.60	16.55	16.55	10.17	18.67	174.67	132.64	66.84	630.92																
6. William V. Pratt	54.74	17.05	61.56	43.95	10.98	6.10	15.05	15.75	9.63	14.89	173.43	124.97	67.11	612.12																
7. Sumner E. Kittle	55.25	17.50	56.34	37.83	9.36	6.50	15.05	16.15	10.71	19.47	173.07	125.20	62.01	603.29																
8. George R. Mervell	49.47	16.60	55.44	39.74	9.54	6.10	15.05	13.90	8.67	18.93	170.13	126.71	63.11	583.73																
9. Louis McC. Nulton	44.79	15.80	54.70	37.31	9.63	6.50	16.15	14.60	7.93	17.47	181.71	122.40	52.91	584.35																
10. Lewis C. Lucas	56.61	15.85	59.78	37.96	8.76	6.50	13.85	13.80	8.67	17.33	166.44	120.60	60.34	587.00																
11. John B. Patton	44.45	16.35	54.14	39.32	9.36	6.00	13.40	12.50	7.62	16.13	170.31	112.40	56.51	566.68																
12. Bertram S. Neumann	51.17	17.09	53.42	34.32	9.39	6.00	12.60	13.75	8.25	18.67	169.32	116.85	54.61	565.75																
13. Charles G. Long	46.07	14.70	53.24	35.86	9.09	6.20	14.55	14.95	8.13	16.27	158.21	123.47	63.73	564.93																
14. William D. MacDougall	53.55	15.15	52.74	37.67	8.31	6.50	13.65	13.70	8.91	14.00	165.51	114.99	59.00	564.68																
15. George W. Panforth	47.94	14.95	51.30	34.71	7.80	6.40	12.90	14.45	8.01	16.13	176.64	120.05	58.05	559.53																
16. Thomas P. Magruder	49.81	15.75	58.64	42.51	8.64	5.10	13.90	14.55	8.10	13.87	152.46	113.09	50.06	555.51																
17. Edward R. Lowndes	47.77	15.70	53.46	35.75	8.46	6.00	15.20	14.00	7.92	11.60	166.83	114.83	54.95	554.67																
18. Louis H. de Stiguer	46.41	14.06	51.24	37.46	9.12	6.90	15.55	14.45	8.10	15.60	163.04	109.71	54.55	549.20																
19. George D. Bradshaw	47.94	13.50	54.50	37.70	8.19	6.00	15.00	14.20	7.46	7.33	100.84	104.91	57.27	549.18																
20. William W. Phelps	51.34	15.50	54.70	34.44	8.76	6.80	12.75	13.35	8.55	14.13	155.35	106.20	54.61	542.22																
21. Louis A. Kaler	44.54	13.40	64.72	35.10	8.79	5.60	14.05	12.00	8.19	6.93	165.67	117.43	54.43	542.15																
22. Charles W. Coffey	66.92	12.90	60.40	37.23	8.01	6.50	13.25	12.75	7.93	16.57	157.51	117.50	57.64	541.67																
23. William C. Cole	47.4	16.35	49.46	34.45	8.64	6.40	12.60	15.10	8.76	1.00	177.20	117.20	59.41	541.50																

24	George G. Mitchell.....	46.07	14.65	55.08	37.18	9.42	6.10	13.00	14.70	8.01	18.80	223.01	156.11	109.21	52.24	540.57
25	Ben H. Fuller.....	47.94	13.65	58.50	40.56	9.93	5.80	16.00	14.35	8.22	8.67	223.62	151.21	109.72	55.70	540.25
26	Charles A. Brand.....	48.28	15.90	53.28	35.36	9.75	5.80	14.70	13.95	8.73	12.80	218.55	150.71	107.73	62.77	539.76
27	Philip Williams.....	49.30	12.75	53.46	34.97	8.52	6.20	13.30	12.85	8.16	12.13	211.64	159.85	106.42	57.47	535.98
28	Robert E. Carney.....	51.34	17.15	51.84	35.49	8.25	6.10	11.40	13.85	8.43	14.53	218.38	151.90	104.02	55.47	529.77
29	Warren J. Terhune.....	44.88	14.15	49.86	33.93	7.74	5.80	13.30	13.05	8.67	7.20	198.58	156.82	111.81	59.98	527.19
30	Robert McM. Dutton.....	44.20	14.45	50.94	32.11	8.37	5.60	12.65	13.00	8.70	12.67	202.69	148.92	107.65	54.29	513.55
31	William K. Harrison.....	43.35	14.30	48.78	34.58	8.49	5.80	13.35	13.30	7.98	15.47	205.40	150.68	101.71	52.70	510.49
32	Julius Prochazka.....	43.69	15.95	45.00	34.84	8.94	6.50	12.90	12.90	7.89	17.87	206.48	147.21	98.08	51.74	503.51
33	George L. Fernier.....	47.26	17.20	45.90	32.89	9.09	6.90	12.50	13.35	0.00	0.00	185.09	148.94	106.78	51.38	492.19

* Completed four years' course "with distinction."

c Completed four years' course "with credit."

Merit roll of the naval cadets of the first class, line division. — Annual examination, June, 1880.

NAME	Discipline.										Aggregate for				General aggregate for four years.
	Swampship, ship building, and naval architecture.	(Ordnance and gunnery.	Astronomy, navigation, and surveying.	Least squares and strength of materials.	Physics and chemistry.	Physiology and hygiene.	International law.	Discipline.	Aggregate for fourth year.	Aggregate for third year.	Aggregate for second year.	Aggregate for first year.	Aggregate for three years.	Aggregate for four years.	
Maximo	64	73	64	50	50	12	4	20	304	224	152	76	760		
1 Thomas P. Babson	78.94	62.10	56.48	17.35	16.45	10.29	6.70	15.73	204.08	194.36	137.00	71.25	609.59		
2 Lawrence Spear	80.72	61.44	56.96	17.85	16.50	10.95	6.64	16.94	270.80	192.80	132.23	64.23	664.06		
3 Noah T. Coleman	75.02	61.20	54.92	17.20	15.45	9.75	6.38	10.47	249.39	140.50	131.22	66.25	633.45		
4 Frank H. Schell	74.10	57.46	52.44	15.76	16.25	9.66	5.92	17.73	234.01	144.65	125.03	64.51	628.60		
5 John V. Chase	66.00	59.64	51.16	16.55	15.15	9.24	6.12	12.33	236.19	180.78	126.23	65.17	609.37		
6 Alonzo Farley	71.20	61.56	52.16	15.50	15.10	8.64	6.12	16.00	248.74	177.38	117.80	58.70	602.60		
7 Henry J. Cameron	64.24	59.22	53.44	13.05	15.45	8.94	6.66	16.07	237.07	171.24	130.67	63.06	602.14		
8 O'Connell	62.92	56.74	48.72	14.20	15.05	9.66	6.44	11.73	224.66	173.54	126.11	64.67	589.18		
9 Matt A. Bagner	64.30	56.22	51.44	10.75	14.95	9.03	5.50	12.57	227.06	169.62	121.96	61.81	576.45		
10 John M. Hutchins	65.14	54.72	49.44	15.05	15.40	9.30	6.34	15.80	231.39	163.57	118.09	61.73	574.78		
11 William H. Lusk	61.60	54.10	44.48	13.80	14.40	9.81	6.26	17.73	222.48	160.54	121.09	64.29	568.40		
12 Montgomery, M. Taylor	67.54	51.18	42.72	13.50	13.75	9.54	6.30	12.40	219.93	164.17	112.10	62.26	569.46		
13 Henry S. Lister	65.74	55.62	51.36	13.75	14.80	9.45	6.24	18.00	234.50	158.01	109.60	57.11	559.52		
14 George W. Williams	60.72	49.50	48.96	13.65	13.05	8.37	6.30	10.13	210.64	161.95	120.18	64.17	558.98		
15 Albert W. Catlin	62.02	49.76	52.32	13.25	13.80	9.63	6.32	10.87	229.47	150.32	109.33	54.53	556.65		
16 Charles H. McNair, Jr.	50.14	64.50	47.04	11.80	13.35	9.00	6.48	17.03	219.68	150.95	117.33	54.29	555.25		
17 Charles J. Vogelgsang	59.10	44.42	42.88	12.60	13.45	9.72	6.34	17.74	210.95	158.43	117.42	62.59	549.19		
18 Lewis H. Everhart	61.34	53.46	48.00	14.35	12.95	8.07	5.26	15.33	222.70	155.73	112.32	57.34	544.15		
19 William A. Snow	54.74	51.60	41.32	12.15	14.50	9.27	6.60	17.01	215.44	157.26	114.00	59.19	546.49		
20 Franklin H. Sullivan	64.40	54.90	47.76	14.75	14.55	9.45	6.00	13.63	215.40	165.63	105.47	55.65	542.21		
21 Charles Bailey	57.20	50.54	40.40	13.45	13.40	8.37	6.72	12.69	204.52	154.99	112.44	61.67	542.62		
22 Wendell C. Neville	61.60	55.44	46.40	12.50	14.15	9.09	5.94	15.60	230.76	154.09	103.67	58.01	570.13		
23 Lawrence H. Moore	57.46	51.12	45.76	15.55	14.30	8.64	6.72	14.01	211.81	161.50	110.68	61.77	570.65		

24	John H. Dayton.....	62.04	53.64	46.24	14.45	14.20	8.70	6.00	10.87	216.14	152.86	107.20	58.31	534.57
25	Lucius A. Boatwick	65.56	52.20	42.24	14.45	13.50	8.79	5.76	10.13	212.63	154.83	107.58	55.90	530.84
26	Charles O. Bond.....	57.64	50.58	42.72	13.55	13.65	9.24	5.78	14.20	207.36	161.06	107.02	53.73	529.17
27	Cyrus S. Radford	58.08	51.66	41.92	12.75	14.10	8.34	5.50	15.40	207.75	158.80	107.16	54.75	528.46
28	Thomas C. Treadwell	55.88	40.96	42.24	13.20	13.55	8.97	5.90	12.00	198.72	157.27	107.91	61.88	525.78
29	William A. Moffett	60.72	47.70	42.72	12.50	13.10	8.61	6.96	8.93	201.24	152.26	111.82	60.05	525.37
30	Julius L. Latimer.....	58.52	51.12	44.48	13.65	13.45	8.28	5.88	15.73	211.11	155.25	97.95	52.02	516.33
31	John R. Edie	55.88	45.18	40.80	12.85	12.55	8.19	5.14	12.47	193.06	149.28	105.41	56.49	504.24

* Completed four years' course "with distinction." e Completed four years' course "with credit."

THE UNIVERSITY OF

Merit roll of the naval cadets of the first class, engineer division.—Annual examination, June, 1880.

NAME	Naval construction	Marine engines	Boiler making machinery	Fabrication	Boilers	Least squares and strength of materials	Mechanics	Chemistry and physics	Physiology and hygiene	Dissipline	Aggregate for				General average for four years
											fourth year.	third year.	second year.	first year.	
Maxima	26	47	60	24	26	20	24	24	12	20	204	224	152	76	760
1 Urban T Holmes	24.94	30.24	42.20	20.46	30.06	17.70	20.82	17.24	8.67	14.93	248.39	181.08	114.83	56.83	600.73
2 Claude R Price	27.81	35.52	47.03	14.66	27.90	12.45	16.94	14.42	9.09	13.40	224.48	165.04	100.15	56.92	556.99
3 Doctor K. Dismukes	21.40	30.44	37.50	20.70	24.84	13.80	15.06	17.64	8.61	11.80	204.12	181.62	101.79	54.40	512.00

Completed four years' course with credit

Merit-roll of naval cadets, second class (52 members), annual examination, June, 1890.

Order of annual merit.	NAME.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics	Modern languages.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima	12	48	12	60	48	20	16	12	228
*1	Frank B. Zahn	11.07	43.80	10.14	54.75	42.84	17.85	14.16	10.34	204.95
*2	Horatio G. Gillmor	10.50	43.32	10.26	53.95	42.24	17.80	13.24	0.66	202.97
*3	Henry G. Smith	11.01	42.12	9.48	55.80	41.16	17.90	13.36	10.66	201.49
*4	DeWitt Blamer	10.88	42.72	9.00	55.50	41.64	15.90	12.60	9.54	197.28
*5	Richard M. Watt	10.62	41.52	9.12	51.90	39.60	17.15	13.64	10.66	194.21
6	John K. Robison	10.68	40.08	9.42	50.40	39.24	17.95	12.56	9.78	190.11
7	Reginald R. Belknap	9.81	41.88	9.93	47.55	39.00	18.05	13.68	9.68	189.58
8	Harley H. Christy	10.32	40.80	9.66	49.95	37.80	15.55	13.40	8.76	186.24
9	Clark D. Stearns	9.99	38.64	10.41	46.80	38.76	17.70	13.28	10.42	186.00
10	Noble E. Irwin	9.57	40.32	10.56	52.05	36.48	14.30	13.04	8.94	185.26
11	Edwin T. Pollock	10.38	39.60	9.33	49.65	37.44	16.80	12.20	9.74	185.14
12	Henry C. Kuenzli	10.47	39.72	9.93	48.30	37.08	16.85	13.60	8.66	184.61
13	John H. Rowen	8.73	41.04	9.81	50.10	38.76	14.15	15.08	6.74	184.41
14	Daniel B. Ninde	9.96	37.68	9.48	46.80	36.72	17.25	15.04	8.22	181.15
15	Arthur L. Willard	10.26	39.36	9.60	40.95	39.36	17.70	11.44	8.70	177.37
16	Waldo Evans	10.14	38.04	9.42	46.35	37.32	15.10	12.56	8.02	176.95
17	Renwick J. Hartung	8.76	39.24	9.90	44.55	36.00	14.50	13.00	9.92	175.87
18	Lucien G. Smith	9.57	35.88	9.60	41.70	36.00	17.15	12.68	9.90	172.48
19	Bion B. Bierer	9.51	35.28	9.78	43.65	33.60	14.65	13.00	9.94	169.41
20	Robert L. Flowers	9.09	36.72	9.87	42.90	33.24	15.65	12.40	8.78	168.65
21	Milton E. Reed	8.46	36.48	10.62	38.40	33.84	16.10	14.64	10.04	168.58
22	Charles R. Emrich	8.88	37.08	9.24	38.10	35.52	16.75	12.90	7.08	165.61
23	Henry H. Hough	8.49	33.84	9.39	37.65	33.24	18.90	13.56	9.20	164.27
24	Harry H. Caldwell	7.83	36.72	8.97	39.75	33.96	16.90	12.04	7.88	164.05
25	Rufus H. Lane	8.25	35.64	8.70	41.85	34.32	14.20	11.80	8.28	163.04
26	John G. F. Moale	8.43	33.12	9.69	37.65	31.80	17.10	14.80	10.28	162.87
27	William H. McGrann	8.34	35.52	9.36	38.10	32.88	16.25	12.76	8.82	161.53
28	Thomas J. Senn	9.51	32.64	8.43	44.40	33.60	14.20	10.08	8.56	161.42
29	George H. Shepard	8.94	35.16	8.10	43.65	33.48	16.35	11.36	4.20	161.24
30	William D. Brotherton	9.21	36.48	9.69	37.65	32.28	14.45	12.16	8.08	160.00
31	Jay H. Sypher	7.80	33.84	9.48	39.00	34.80	15.60	12.20	6.54	159.26
32	Richard H. Leigh	8.82	31.56	9.87	39.15	32.16	14.55	12.64	9.48	158.23
33	Albert S. McLemore	8.61	32.88	9.24	37.65	30.24	18.15	11.44	6.94	155.15
34	Harry E. Smith	7.80	31.56	10.11	37.50	32.04	13.25	13.84	8.58	154.68
35	George Richards	8.04	31.20	8.70	39.30	33.00	13.85	13.24	5.92	153.25
36	James F. Carter	8.61	33.24	9.48	37.95	30.96	14.40	11.32	6.86	152.82
37	William M. McKelvy	8.67	30.36	9.30	37.65	30.00	14.55	11.44	10.08	152.05
38	George W. Laws	7.95	32.24	8.79	39.00	31.68	14.05	11.32	6.18	151.25
39	Horace G. Macfarland	7.53	32.16	8.46	37.65	33.96	15.20	10.20	4.19	149.35
40	David V. H. Allen	8.22	31.44	8.85	37.65	31.32	14.80	10.48	6.58	149.34
†	Adelbert Althouse	9.87	38.72	9.63	36.00	34.80	14.50	13.08	9.12	160.72
†	Frank H. Kochersperger	8.55	34.20	11.13	36.15	31.80	15.00	14.40	8.46	159.69
†	Charles F. Preston	8.34	30.48	9.06	37.65	29.16	16.10	12.86	9.46	153.11
†	William H. Ford	8.58	31.20	9.60	36.30	29.76	15.25	12.24	9.98	151.11
†	Dion Williams	7.59	32.40	8.97	34.95	31.08	13.20	12.84	8.70	149.11

THE UNIVERSITY OF

Merit-roll of naval cadets, second class (52 members), etc.—Continued.

Order of annual merit.	NAME.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Discipline.	Aggregate.
		12	12	12	60	45	20	16	12	225
1	Irving Blount	9.21	32.76	9.24	36.45	30.12	14.75	11.24	6.36	140.57
1	Lewis H. Crona	8.82	30.60	9.12	34.55	30.60	13.70	9.76	7.68	144.61
1	Elisha Treall	7.89	30.00	8.88	37.50	29.40	14.10	12.34	7.18	147.16
1	Roby Robinson	7.65	30.36	9.33	35.70	26.88	13.55	10.88	7.36	141.71
1	Charles W. Lyle	6.75	30.00	9.12	33.45	29.64	13.40	10.76	8.00	141.12
a	John T. Myers . . . . .	.....	.....	8.19	.....	.....	.....	.....	.....	.....
b	Kagekazu Nire . . . . .	.....	.....	9.51	.....	.....	.....	12.32	9.22	.....

a, sick b, deficient, continued with class.

Merit-roll of naval cadets, third class (54 members), annual examination, June, 1890.

Order of annual merit.	Name.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima.....	48	24	24	24	24	8	152
*1	John D. Beuret.....	48.36	22.56	21.96	22.56	22.92	5.66	144.02
*2	Joseph E. McDonald.....	47.76	20.40	19.98	19.32	20.28	6.67	134.41
*3	Homer L. Fergusson.....	43.44	20.22	21.42	22.62	19.68	5.65	133.03
*4	John B. Y. Blakely.....	46.44	20.94	18.42	20.70	22.02	3.27	131.79
*5	Luke McNamee.....	42.48	19.86	21.90	20.40	20.22	5.84	130.70
*6	William C. Dawson.....	40.44	19.44	22.56	23.04	18.84	5.44	130.68
7	George C. Day.....	42.00	20.52	21.00	18.48	19.92	6.16	128.08
8	Joseph R. Campbell.....	38.64	21.72	20.22	19.74	21.36	5.68	127.36
9	Gregory C. Davison.....	42.72	20.16	20.58	17.82	19.80	6.11	127.19
10	Charles T. Jewell.....	43.20	19.62	20.64	18.72	19.38	4.40	125.96
11	Charles L. Hussey.....	39.96	18.24	20.46	19.26	18.90	6.50	123.32
12	Holden A. Evans.....	38.16	17.40	21.36	19.44	17.86	6.96	121.20
13	Howard W. Huffington.....	38.16	17.70	19.86	17.52	20.82	6.50	120.56
14	Frederick A. Traut.....	34.56	18.96	18.90	22.38	19.68	6.03	120.51
15	Frederick L. Sawyer.....	33.84	21.42	20.46	19.20	19.20	6.25	120.88
16	Leon S. Thompson.....	36.72	17.10	18.54	20.40	18.36	6.67	117.79
17	John S. Porter.....	39.00	20.10	19.20	17.52	18.90	2.61	117.33
18	William E. Hoblitzelle.....	37.56	16.14	17.64	17.28	22.08	6.24	116.94
19	James Shehan.....	35.88	15.72	18.12	19.98	20.82	5.21	115.73
20	Emmett R. Pollock.....	35.64	16.08	19.02	21.12	18.12	5.51	115.49
21	Arthur Rice.....	33.36	15.30	19.56	19.14	21.84	6.24	115.44
22	Theodore H. Low.....	34.32	17.70	20.58	18.66	19.20	4.35	114.87
23	John F. Hines.....	35.40	17.22	18.12	16.50	20.04	6.85	114.13
24	Thomas S. Borden.....	31.92	16.68	20.04	20.04	18.54	4.99	112.21
25	Walter Ball.....	36.72	18.00	17.28	17.64	18.48	2.61	110.79
26	Thomas L. Stitt.....	32.52	16.32	19.26	17.94	18.30	6.43	110.77
27	Stanford E. Moses.....	30.96	15.72	18.90	19.62	19.36	6.14	110.72
28	Fred R. Payne.....	36.96	17.76	18.84	18.30	18.36	-0.51	109.71
29	Austin R. Davis.....	34.56	17.94	17.10	17.94	19.98	2.12	109.64
30	Powers Symington.....	31.32	17.10	19.38	20.88	16.56	4.37	109.61
31	George H. Mather.....	35.28	17.04	17.94	16.68	17.28	5.23	109.44
32	Aaron L. Gamble.....	33.72	16.50	18.54	18.54	17.64	4.32	109.26
33	Edgar E. Arison.....	33.12	16.20	17.04	20.40	17.28	4.72	108.76
34	Robert K. Crank.....	31.08	16.50	19.50	20.22	18.42	2.46	108.18
35	Yates Sterling, jr.....	35.88	17.28	16.98	17.22	16.80	3.52	107.68
36	Joel B. P. Pringle.....	31.32	15.24	17.88	20.76	16.74	5.22	107.16
37	Frederick W. Stopford.....	35.04	17.16	18.36	19.02	16.98	-0.40	106.16
38	Christian C. H. Zillman.....	30.48	15.06	19.62	17.76	17.16	5.78	105.86
39	Raymond De L. Hasbrouck.....	34.08	16.92	16.50	16.80	19.62	1.78	105.70
40	George Mallison.....	32.64	17.82	16.56	16.86	16.50	4.91	105.29
41	Edward S. Kellogg.....	32.16	15.66	16.26	15.72	19.26	6.22	105.28
42	Charles F. Macklin.....	35.52	15.42	15.24	17.04	16.50	4.15	103.87
43	Charles T. Pollard, jr.....	30.72	16.26	17.04	19.14	15.90	4.45	103.51
44	Philip M. Bannon.....	30.48	15.06	17.22	15.78	18.48	5.35	102.00
45	Stanley P. Dennett.....	30.72	15.00	15.48	16.98	16.86	6.27	100.00

THE UNIVERSITY OF CHICAGO

Merit-roll of naval cadets, third class (54 members), etc.—Continued.

Order of annual merit	Name.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Average.
		44	24	24	24	24	8	162
46	Washington D. Gibbs.....	33.36	16.14	15.90	17.22	15.42	0.88	98.7
1	Benjamin B. McCormick.....	29.64	14.40	19.98	20.10	19.92	6.21	110.2
1	Charles Allen.....	31.44	14.58	17.40	17.32	21.00	4.94	107.6
1	John H. Russell, jr.....	33.72	14.76	17.10	15.96	18.18	5.91	105.52
1	George Wedekind.....	30.24	14.22	17.04	17.28	19.14	6.01	107.5
1	Jonah G. Sawyer.....	30.00	14.64	15.42	16.02	18.90	6.40	111.8
1	Joseph C. Breckinridge.....	31.20	14.22	18.72	17.82	15.54	4.43	101.9
1	Bertie E. Jones.....	29.64	14.34	16.02	15.84	18.00	4.67	99.1
1	Warren Rodney.....	29.28	14.40	16.80	16.38	16.20	4.97	98.8

Merit-roll of naval cadets, fourth class (72 members), annual examination, June, 1890.

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline.	Aggregate.
	ERRATUM. Page 51. Joseph C. Graff should read " " Groff.					
	Maxima.....	24	24	24	4	76
*1	Eugene L. Bisset	21.96	23.28	21.66	3.26	70.16
*2	Thomas D. Parker.....	21.96	20.16	22.38	2.40	67.90
*3	Edwin A. Elder.....	21.06	22.20	21.36	3.08	67.70
*4	Louis J. Magill.....	19.86	21.12	22.50	3.28	66.76
*5	Henry H. Ward.....	19.86	22.32	21.12	3.26	66.56
*6	Maurice B. Peugnet.....	21.96	16.56	24.42	3.58	66.52
*7	W. V. N. Powelson.....	20.04	22.68	20.64	3.13	66.49
*8	Frank H. Clark, jr.	20.04	21.96	19.62	3.44	65.06
*9	Joseph C. Graff.....	19.62	20.16	21.42	3.41	64.61
10	William G. Powell.....	18.78	19.08	22.20	3.15	63.21
11	Thomas S. Kellogg	20.16	18.84	20.94	3.15	63.09
12	Charles J. Lang	20.04	19.26	20.58	3.07	62.95
13	Hubbard M. Feild	20.58	20.10	19.38	2.75	62.81
14	William S. Montgomery	19.32	22.50	17.34	3.32	62.48
15	Claude E. Fitch.....	18.90	19.26	20.40	3.20	61.76
16	John P. J. Ryan	19.50	17.88	21.00	3.31	61.69
17	Walter S. Crosley	18.42	20.82	18.06	3.50	61.40
18	Daniel C. Nutting, jr.	20.22	18.72	19.02	3.43	61.39
19	William K. Glise	20.04	17.34	19.14	3.29	60.71
20	William S. Valentino	19.86	15.24	22.14	3.43	60.67
21	John S. Doddridge	20.40	19.68	16.98	3.19	60.25
22	Frank L. Chadwick	19.74	18.78	18.48	3.16	60.16
23	Edward H. Campbell.....	17.76	21.06	18.06	3.20	60.08
24	Allen M. Cook.....	19.86	19.02	17.94	3.00	59.82
25	James C. Hooker	19.14	15.90	21.00	3.45	59.49
26	Chester Wells	18.78	18.42	19.56	2.63	59.33
27	Percey N. Olmstead.....	19.02	18.54	18.54	3.28	59.38
28	Orton P. Jackson	20.16	18.18	17.82	2.94	59.10
29	Thomas S. Wilson	20.46	18.18	16.98	3.10	58.81
30	John R. Brady.....	18.90	18.00	18.66	2.12	57.68
31	Peter C. Hains, jr.	18.90	16.44	19.14	3.11	57.59
32	James S. Coleman.....	16.56	18.48	19.20	3.20	57.44
33	John A. Crocker.....	19.08	17.34	17.64	3.27	57.33
34	Frank D. W. Read.....	19.68	15.30	19.26	3.07	57.31
35	Richard S. Douglas	19.14	16.62	18.72	2.77	57.25
36	David M. Berry.....	18.12	17.22	17.76	3.57	56.67
*37	Graham Shaw	18.84	15.96	19.26	1.94	56.00
38	Frank B. Upham	17.52	16.50	18.54	3.37	55.93
39	John R. Morris	17.04	18.66	17.94	2.87	55.91
40	Martin E. French.....	18.00	17.22	17.46	3.19	55.87
41	Andre N. Procter.....	17.04	19.44	16.98	2.28	55.74
42	William G. Groesbeck	17.28	15.48	20.46	2.34	55.56
43	William B. Logan.....	17.34	17.04	18.00	3.07	55.45
44	Gerald L. Holsinger	18.24	16.92	16.62	3.15	55.93
45	John L. Sticht.....	17.88	17.88	16.26	2.72	55.74

ERRATA.

Martin E. French, } should read { Martin E. Trench.
Andre N. Procter } Andre M. Procter

Merit roll of naval cadets, fourth class (72 members), etc.—Continued.

Order of annual merit.	NAME	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline	Aggregate.
	Maxima	24	24	24	4	76
46	Worth Bagley	17.76	15.00	18.30	2.80	54.86
47	Richard Stardevant	19.72	15.54	16.38	3.37	54.01
48	Guy T. Scott	17.04	15.78	17.76	3.04	54.62
49	Walter B. Whitman	18.54	15.00	16.86	3.43	54.83
50	Alfred A. McKethan	17.16	17.22	16.74	2.24	54.36
51	Edward C. Stearns	18.06	15.00	16.74	3.23	54.03
52	Louis G. Asbury, jr.	16.80	15.00	19.30	2.47	53.57
53	Henry A. Pearson	18.00	15.48	16.20	2.46	53.14
54	Joseph A. Perry	16.38	16.62	16.26	3.44	52.70
55	Christopher C. Fowel	16.74	16.38	16.20	3.09	52.41
56	Marvin Carter	18.06	15.06	18.42	3.11	52.65
57	James B. Potter	16.92	15.30	16.86	2.72	51.80
58	Lewis C. Baird	16.62	16.08	16.44	2.24	51.38
59	Alfred A. Pratt	17.16	15.12	16.14	2.46	51.88
60	William C. Wishart	15.66	15.00	17.04	3.16	50.86
61	Andrew J. Cruise, jr.	16.44	15.84	16.86	1.56	50.70
62	Henry B. Price	19.02	14.58	18.06	3.43	55.09
63	Walter J. Marston	17.04	14.76	19.08	2.44	53.32
64	George W. Ryan	16.20	14.82	18.78	3.12	53.92
65	Lewis B. Jones	16.20	14.46	16.92	3.10	50.74
66	Arthur C. Townsend	16.92	14.34	15.72	2.25	50.23
67	Ernest L. Bennett .....	.....	.....	.....	.....	.....
68	John A. Cobb, jr. ....	.....	.....	.....	.....	.....
69	Henry L. Daley .....	.....	.....	.....	.....	.....
70	Island F. James .....	.....	.....	.....	.....	.....
71	Moulton K. Johnson .....	.....	.....	.....	.....	.....
72	William B. Randolph .....	.....	.....	.....	.....	.....

a Sick.

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

IV. Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be not less than fifteen nor more than twenty years of age, and physically sound, well formed, and of robust constitution.—(*Rev. Stat.*, § 1517, and act of Congress approved March 2, 1889.)

V. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examinations shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat.*, § 1515.)

VI. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

VII. "Naval cadets found deficient at any examination shall not be continued at the Academy or in the service unless upon the recommendation of the academic board."—(*Rev. Stat.*, § 1519.)

VIII. "The academic course of *naval cadets* shall be six years."—(*Rev. Stat.*, § 1520.)

IX. Candidates who may be nominated in time to enable them to reach the academy by the fifteenth of May will receive permission to present themselves on that date to the superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the academy immediately after passing prescribed examinations.

No leaves of absence will be granted to cadets of the fourth class.

EXAMINATION.

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

- Feeble constitution, inherited or acquired;
- Retarded development;
- Impaired general health;
- Decided cachexia, diathesis, or predisposition to disease;
- Any disease, deformity, or result of injury that would impair efficiency; such as—
- Weak or disordered intellect;
- Cutaneous or communicable disease;
- Unnatural curvature of spine, torticollis, or other deformity;
- Inefficiency of either of the extremities or large articulations from any cause;
- Epilepsy or other convulsions within five years;
- Impaired vision, disease of the organs of vision, imperfect color sense;
- Impaired hearing or disease of the ear;
- Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
- Impediment of speech to such an extent as to impair efficiency in the performance of duty;
- Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
- Hernia or undescended testis;
- Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
- Disease of the genito-urinary organs;
- Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the academy. In the case of doubt as to the physical condition of the candidate any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

Table showing the minimum height for admission for each year between the ages of fifteen and twenty.

Age	15	16	17	18	19	20
Height (inches)	60	60½	61	61½	62½	63

Table showing mean height, weight and chest girth of lads between the ages of fifteen and twenty years.

Age	Height (without shoes).	Weight (including clothes).	Chest girth (without arms)
	Inches	Pounds	Inches
15	62½	110	34
16	65½	120	36
17	68	140	38
18	69½	146	39
19	71½	148	40
20	73	150	41

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or concrete, and to use with facility the tables of money, weights, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The question will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; *e. g.*,

"They were always a strange family; they rarely acted like other people; their her were in the right place, but their heads always seemed to be doing anything but w^h"

ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus,—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected; thus,—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have been there and seen it.* 5. *There's a sweet little cherubim sit up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: the definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they flow; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands, and colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude, of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were these colonies united? What did the colony of *Pennsylvania* include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates who pass the physical and mental examinations will receive appointments as naval cadets, and become students at the academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the naval academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles; viz.,

One dress jacket.....	\$17.50	One jack knife	\$0.75
One blouse	10.50	Six sheets	3.36
Two pairs trousers	19.00	Hammock clews.....	.58
Two working suits	1.86	One pair of bathing trunks .....	.20
One overcoat.....	20.50	Three pairs of white thread gloves .....	.60
One rubber coat.....	4.00	Two black silk neckties.....	.64
One rubber hat .....	.53	Two clothes bags.....	.46
Two pairs of regulation leggins..	1.40	One hammock mattress.....	2.85
One parade cap.....	2.55	aOne requisition book.....	.40
One knit cap.....	.66	aOne pass book.....	.40
One mug.....	.10	aStencil, ink, and brush .....	.45
One soap box.....	.62	aOne bottle of indelible ink.....	.18
One laundry book.....	.34	aOne wash basin and pitcher.....	.88
One pair of blankets.....	2.90	aOne pair of gymnasium slippers..	1.10
Two pairs of high shoes.....	6.84	*One whisk .....	.13
One pair of overshoes.....	.55	*One coarse comb.....	.05
Eight white shirts.....	8.00	*One cake of soap.....	.10
Twelve linen collars.....	2.04	*One hair brush .....	.50
Eight pairs of cuffs.....	2.00	*Stationery .....	.50
*Eight pairs of socks.....	1.84	*Twelve white handkerchiefs	2.76
*Eight towels.....	2.00	*One pair of suspenders.....	.40
*Shaving outfit.....	1.55	*Four night shirts	2.52
*Four pairs of drawers (winter)..	4.00	*One tooth brush.....	.23
bFour pairs of drawers (summer)..	1.52	*Thread and needles.....	.19
*Four undershirts (winter).....	4.00	*Blacking brush and blacking... ..	.30
bFour undershirts (summer).....	1.52	*Nail brush .....	.25
One hand glass.....	.36		
			20.78
	118.68		

When moving into cadet quarters, cadets will supply themselves with the following articles; viz.,

a Two bedspreads	\$2.84	One mirror.....	\$1.20
a Two pairs of drill gloves.....	1.00	a One rug.....	.80
a One slop jar.....	.93	a One hair mattress.....	5.10
a Two spatter-c oths.....	.66	a One broom.....	.25
One hair pillow.....	.75	Six pillow cases	1.38
	6.18		8.73

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship; viz.,

Three working suits.....	\$2.79	One pair rubber leggins.....	\$0.40
Four woolen shirts.....	7.40	One pair of high shoes.....	3.41
Three white sailor hats.....	1.14	One knit cap.....	
	11.33		

Articles marked *a* will not be taken on board the practice ship.
Of the articles marked *b* cadets entering in September must have four each.
The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.
Each naval cadet must on admission deposit with the pay-officer the sum of \$50, which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles, beside those enumerated in the preceding article.
All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc.....	\$150 .-
Deposit for books, etc.....	20 .-
Total amount required.....	170 .-

The value of clothing brought from home is to be deducted from this amount
Each naval cadet *one month after admission* will be credited with the amount of actual expenses in traveling from his home to the academy.
XIV. A naval cadet who voluntarily resigns his appointment within a year of the time of his admission to the academy will be required to refund the amount paid for traveling expenses.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Todhunter's Higher Algebra.
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenot's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: "Natural method of teaching languages."	La Parole Française, Sauveur and Van Daell. Bellows's Pocket Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department	Number of recitations a week.	Number of months.	Subjects.	Text-books
<i>Mathematics</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; summation of series, continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Hall and Knight's Higher Algebra Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry, the cone and the cylinder, mensuration of rectilinear figures, and of the sphere, cone, and cylinder, application of algebra to determinate geometry.	Chauvenet's Geometry.
<i>English Studies, History and Law</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words, kinds of composition; narration and description, argumentative composition, exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Rhetoric. Ayres's Orthography. Ayres's Vocabulary. Webster's Dictionary.
	2	4	HISTORY: Progress of colonial development in America, and the history of the United States, important points in the naval history of the United States by notes or lectures. Contemporary history, including the comparative study of governments, institutions, and political geography.	Blodgett's History of the United States. Mitchell's Atlas. The School Herald. Mitchell's Atlas.
	2	4	MODERN LANGUAGES: French given as an advanced course by Natural Method. SPANISH: Given as an advanced course by Natural Method. GERMAN: Given as an advanced course by Natural Method.	Herey: Les Langues. Française: French. Histoire d'un Français. Belloc's Pocket Dictionary. Worman's First Spanish Book. Sears's Dictionary. Dreyer's German. The Method and the German Verb Drill. Whitney's Dictionary.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
Mathematics.	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles, construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry; Todhunter's Trigonometry. Bowditch's Useful Tables.
English Studies, History, and Law.	1	4	ENGLISH: Faults in diction and their remedies; selection and arrangement; principles of composition; exercises in the composition of official dispatches, letters, and telegrams; themes.	Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verbalist.* Webster's Dictionary.* The School Herald. Mitchell's Atlas.*
	1	4	HISTORY: Contemporary history, including the comparative study of governments, institutions, and political geography.	
	2	4	LAW: Constitution of the United States.	Andrews's Manual of the Constitution.
Modern Languages.	3	4	FRENCH: "Natural method."	Bücher's Series of French Plays. Bercy La Langue Française 2 ^{me} Partie. Bellows's Dictionary.* Sauveur Petite Grammaire. Farras English-Spanish Method. Dreyspring's Cumulative Method and German Verb Drill.
			SPANISH: (Given as an advanced course.) "Natural method." GERMAN: (Given as an advanced course.) "Natural method."	
Mechanical Drawing.	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved fig-	Tomkin's Machine Construction.*

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
Mechanical Drawing (continued).			lines to scale, drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	

SECOND TERM.

Physics and Chemistry	5	4	<p>PHYSICS. An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY. Recitations in general and organic chemistry. Practical work in the chemical laboratory, experimental illustrating the daily recitations, and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniel's Physics; Physics Practical Physics Stewart and ...</p> <p>Remond's General Chemistry Remond's Organic Chemistry Lecture Notes</p>
Mathematics	1	4	<p>DESCRIPTIVE GEOMETRY. Course for first term continued. Warped surfaces, and surfaces of revolution, development of single curved surfaces, intersection of surfaces, tangent lines and planes, projections of the sphere, axonometric projections, shades and shadows.</p> <p>ANALYTICAL GEOMETRY. Equations of the straight line and of the conic sections. Transformation of coordinates, properties of the conic sections, equations to tangents and normals, determination of loci, discussion of the general equation of the second degree, equations of the plane of lines in space, and of surfaces of the second order, the principal properties of surfaces of the second order, discussion of the general equation of the second degree in three variables.</p>	<p>Curtis's Descriptive Geometry</p> <p>C. Smith's General and Analytical Geometry.</p>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM--continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Modern Languages.	2	4	FRENCH: Continuation of first term course. SPANISH: Continuation of first term course. GERMAN: Continuation of first term course.	Same as for the first term.
Mechanical Drawing.	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Tomkin's Machine Construction.*

THIRD YEAR—SECOND CLASS

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction and Naval Tactics.	1	4	SEAMANSHIP: Description and uses of sails, their fittings and appliances, handling sails, port drills and evolutions; management under sail; duties of officers and crew.	Luce's Seamanship.
Steam Engineering.	3	4	PRINCIPLES OF MECHANISM: Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers; comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention; types of marine engines including condensers and pumps, with explanation of the use of all the parts; screw propellers and paddle wheels; the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Goudave's Elements of Mechanism. Sennett's Marine Steam Engine.
Mechanics and Applied Mathematics.	3	2	DIFFERENTIAL CALCULUS: Functions, rates, differentials of functions; indeterminate forms; series, maxima and minima, geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	3	2	INTEGRAL CALCULUS: The methods of integration; definite integrals, quadrature of surfaces, cubature of volumes, rectification of curves, centres of gravity, moments of inertia, planimeters, rules for the approximate determination of areas and volumes, differential equations.	Johnson's Integral Calculus. Johnson's Differential Equations
Physics and Chemistry.	4	4	PHYSICS: Recitations on simple harmonic motion, wave motions, sound, light, and heat. Practical work in the physical laboratory, experiments illustrating the daily recitations and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses, length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics by Stewart and Lee. Kohlrausch's Physics. Measurements. Lecture Notes.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Professional French Reader. Bellows's Pocket Dictionary.* Sauveur Petite Grammaire.* Langage Marin, Anglais-Français.
<i>Mechanical Drawing.</i>	2	1	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction.*

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Astronomy, Navigation and Surveying</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	White's Astronomy; Chauvenet's Spherical and Practical Astronomy.* Bowditch's Navigator. American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3½	4	Marine engines and boilers. Course for first term continued.	Sennett's Marine Steam Engine.
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
Physics and Chemistry	4	4	<p>PHYSICS. Recitations in light and heat concluded.</p> <p>Electricity and magnetism commenced.</p> <p>Practical work in the physical laboratory: calibration of thermometers, determination of the hygrometric state of the atmosphere, measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision.</p> <p>Photography. General experiments illustrating the phenomena of statical and voltaic electricity, setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.</p>	<p>Same as for the first term.</p> <p>Thompson's Electricity and Magnetism</p> <p>Ayrton's Practical Electricity</p> <p>Day's Exercises in Electrical Measurements.</p> <p>Lecture Notes</p>
Modern Languages	1	1½	<p>FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.</p>	<p>Same as for the first term, and French newspapers.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	3	4	<p>SEAMANSHIP: Uses of compass, lead, log, and sounding machines; principles of marlinpike seamanship, including cutting, fitting, and reeving rigging; description and uses of sails, their fittings and appliances; stowage and organization; management of boats; handling sails; management under sail and under steam; turning and maneuvering, wharfing, docking, towing, piloting, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; control of behavior among waves, and performance in general.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship, section, and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamanship. Special Notes and Drawings. Navy Department Pamphlets White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture.</p> <p>Navy and International Signal Books. Fleet Drill Book, (Navy Department.) Welch's Text-book of Naval Architecture.</p>
<i>Ordnance and Gunnery.</i>	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions. Text-book of Ordnance and Gunnery (Naval Academy publication). Gunnery Drill Book for the New Armaments. (Bureau Ordnance publication.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Ordnance and Gunnery—Continued.			<p>INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Upton's Tactics.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Exterior Ballistics (Naval Academy publication).</p> <p>Ordnance Notes (Office of Naval Intelligence)</p>
Astronomy, Navigation, and Surveying.	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p> <p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle and the mechanical correction of the deviation and heeling error.</p>	<p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Walker's Navigation</p> <p>Bowditch's Navigator</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Admiralty Manual for the Deviations of the Compass.</p>
Mechanics and Applied Mathematics	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulae; independent observations, conditioned observations.	Johnson's Method of Least Squares
	3	3	APPLIED MECHANICS: Elasticity, stress and strain; theory of structures; strength and deflection of beams; beams of uniform resistance.	Cotterill's Applied Mechanics

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric light wires; experiments upon induction; practice in photography and micro photography.	Same as for the second class year. Lecture Notes.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	4	Course of the first term continued.	Same as for the first term.
<i>Ordnance and Gunnery.</i>	5	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication).</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Accuracy and Probability of Fire (Naval Academy publication).</p> <p>Nomenclature of steel B. L. R. guns and carriages and mounts for Hotchkiss guns. (Bureau of Ordnance.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS including the nature and causes of the several parts of the deviation, the determination of the vertical and horizontal forces of the earth and the ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and the heeling errors. Navigation.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used, selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Admiralty Manual for the Deviations of the Compass.</p> <p>Chauvenet's Spherical and Practical Astronomy.*</p> <p>Phelps's Practical Marine Surveying.</p> <p>Projection Tables.</p>
<i>English Studies, History, and Law.</i>	2	4	<p>INTERNATIONAL LAW: The objects, sources, and sanctions of international law, the laws of war, embargo, reprisal, and retorsion; blockade; contraband of war, right of search, ship's papers and nationality; prizes; privateering; piracy, the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters, licenses to trade, captures.</p>	<p>Glass's Marine International Law.</p>
<i>Physiology and Hygiene.</i>	1	4	<p>PHYSIOLOGY AND HYGIENE General description of the human body and its functions, the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction. Fridays 7:30 to 9:30 p. m., additional.)</p>	<p>Brown's Eclectic Physiology.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering—Continued.</i>	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected and the resistance offered to these strains; relative value of materials used in machinery; testing materials; principles and considerations governing the design, drawing, specifications, and proportion of the various parts of engines and boilers, with practical application in the designing room.	Unwin's Elements of Machine Design. Wilson's Steam Boilers. Shock's Steam Boilers.*
<i>Mechanics and Applied Mathematics.</i>	3	4	Same as for the line division.	Same as for the line division.
<i>Physics and Chemistry.</i>	3	4	Same as for the line division.	Same as for the line division.

SECOND TERM.

<i>Seamanship, Naval Construction and Naval Tactics.</i>	3	4	Course of the first term continued.	Same as for the first term.
<i>Steam Engineering.</i>	2	4	MARINE ENGINES: Continuation of first term course. Physical properties of steam; convertibility of heat and work; theory of the steam engine; air and heat engines, efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction and re-evaporation; experiments on the steam engine, and the methods of determining its efficiency.	Seaton's Marine Engineering. Thurston's Engine and Boiler Trials. Cotterill's Steam Engine Considered as a Heat Machine.
	3	4	BOILERS: Course of the first term continued.	Same as for the first term.
	4	4	DESIGNING MACHINERY: Course of the first term continued.	Same as for the first term.
<i>Mechanics and Applied Mathematics.</i>	3	4	APPLIED MECHANICS: Kinematics and dynamics of machines; transmission and conversion of energy by fluids.	Cotterill's Applied Mechanics. Bower's Hydro-mechanics.
<i>Physics and Chemistry.</i>	3	4	Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics					1	1	3	4	2	3
Ordnance and Gunnery							3	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam Engineering					3	3			8	9
Mechanics and Applied Mathematics					5	5	3		3	3
Physics and Chemistry				5 F	4	4	3		3	
Mathematics	6	5	5	5						
English Studies, History, and Law ..	5	5	4					2		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing			4	3½	2					
Physiology and Hygiene								½ F		½ F

F, Friday, 7.30 to 9.30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying				M. W. F. S. (1)	
English Studies, History, and Law	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)			
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. W. Th. F. (3)	T. (3) S. (1)		
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (7.30 to 9.30 p.m.)		
Ordnance and Gunnery				T. Th. (2), F. (3)	
Physics and Chemistry			T. W. Th. F. (2)	M. (3), T. Th. (1)	M. T. Th. (1)
Seamanship, Naval Construction and Naval Tactics			M. (3)	T. W. Th. (3)	T. W. (3)
Steam Engineering			W. Th. F. (3)		{ W. F. S. (1), T. Th. (2), M. Th. F. (3).

SECOND TERM.

Astronomy, Navigation, and Surveying			W. F. (3)	M. T. Th. F. (1)	
English Studies, History, and Law	M. T. W. Th. F. (3)			W. (1), F. (2)	
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. (1), T. F. (3), S. (1)			
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		M. T. Th. (2)
Modern Languages	M. T. W. Th. F. (2), S. (1)	W. Th. (3)	S. (1), F. (7.30 to 9.30 p.m.)		
Ordnance and Gunnery				M. T. W. Th. (2), F. (3)	
Physics and Chemistry	{ M. (3), T. W. Th. F. (1), F. (7.30 to 9.30 p.m.) }		M. T. Th. F. (2)		
Physiology and Hygiene				S. (1), F. (7.30 to 9.30 p.m.)	S. (1), F. (7.30 to 9.30 p.m.)
Seamanship, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			M. T. Th. (3)		{ M. T. W. Th. F. (1), W. F. (2), F. (3).

* Lectures and practical instruction

† Saturday period from January 31 to March 10

TABLE OF COEFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline	4	8	12	16	16	160	160		
<i>Seamanship, Naval Construction, and Naval Tactics.</i>									
Seamanship, Ship building, and Naval Tactics			3	13	8		44	56	32
Cruise Reports, Navigation Note Books, Journals, and Station Bills.....								24	36
Practice Cruise.....				2		72			
<i>Ordnance and Gunnery.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery				} *15		60		44	
Ordnance and Gunnery.....									
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying....			3	12			12	44	
Practice Cruise.....				2		68			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers			8					20	
Summer Practical Work.....			3		5	44			
Marine Engines.....					10				88
Designing Machinery.....					12				
Boilers					8		184		56
<i>Mechanics and Applied Mathematics.</i>									
Differential and Integral Calculus, and Mechanics.....			12						
Least Squares and Strength of Materials..				5	5	68			
Mechanics					5		88		
<i>Physics and Chemistry.</i>									
Chemistry and Physics.....		5							
Physics			10	5	5	80	80		
<i>Mathematics.</i>									
Algebra and Geometry.....	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry.....		10				60	60		
<i>English Studies, History, and Law.</i>									
English and History.....	5								
English, History, and Law.....		4		4		52	36	24	
<i>Modern Languages.</i>									
French, Spanish, and German.....	5	5	3			52	52	28	28
<i>Mechanical Drawing.</i>									
Mechanical Drawing.....		6	3			36	36		
<i>Miscellaneous.</i>									
Physiology and Hygiene.....				2	2	8	8		
Maxima for each class.....	76	152	228	304	304	760	760	240	240

*In making up the standing for a year the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling. Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

Setting up drill; school of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, boat howitzers, and machine guns; target practice with small arms; target practice afloat with machine guns; rifled howitzers, Hotchkiss rapid-fire guns, and great guns; small-sword exercise; broad-sword exercise; bayonet exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; the preparation and inspection of ordnance material.

Two gold medals are awarded annually for marksmanship; one to the cadet of the first class who excels in great-gun practice, and one to the cadet of the second class who excels in practice with the service rifle and revolver.

In June, 1890, the great-gun medal was awarded to Cadet Claude Bailey, of Arkansas. The practice was from the steamer *Standish*, at ranges varying from 1,100 yards to 1,400 yards, with the Hotchkiss 3-pounder and 6-pounder rapid-fire guns. The best three scores were:

	Score.	Percentage of total marks.
Cadet Bailey	258	264
Cadet Coleman	234	240
Cadet Schofield	192	200

The scoring was on the service-vertical target.

In October, 1890, the small-arms medal was awarded to Cadet Davison, of Missouri. The targets used were the Army A and B for the Hotchkiss rifle, and a rectangle 14 by 24 inches for the revolver. The score was as follows:

	Distance	Percentage of total marks.
Rifle		
On shore, A target	170	70
From boat, B target	300	120
Revolver		
Revolver, 14 by 24 inch target	0	24

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Academic months.	Week	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company (4).	Company (4).	Target great guns (4).	Steam tactics (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	2	Battery (4).	Battery (4).	Steam tactics (4).	Target great guns (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov....	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns (4).	Steam tactics (4).	Company (4).	Company (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec' ...	2	Steam tactics (4).	Target great guns (4).	Battery (4).	Battery (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Jan' ..	1	Broadword.	Steam.	Broadword.	Steam.
	2	Steam.	Broadword.	Steam.	Broadword.
	3	Broadword.	Steam.	Broadword.	Steam.
	4	Steam.	Broadword.	Steam.	Broadword.
Feb' ...	1	Small sword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Small sword.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Small sword.	Steam.
	4	Steam.	Practical ordnance.	Small sword.	Steam.

SEMI-ANNUAL EXAMINATION

Feb' ...	1	Steam	Practical ordnance.	Steam	Small sword
	2	Broadword.	Steam	Seamanship	Steam
	3	Steam	Broadword	Steam.	Seamanship
	4	Seamanship.	Steam.	Broadword.	Steam
Mar ...	1	Steam	Seamanship	Steam	Broadword
	2	Deviation compass (4).	Deviation compass (4).	Deviation compass (4).	Deviation compass (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April....	4	General quarters.	General quarters.	General quarters.	General quarters.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May....	3	Skirmish (4).	Target great guns (4).	Torpedoes (4).	Steam tactics (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June....	1	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battalion infantry (4).	Battalion infantry (4).	Battalion artillery (4).	Battalion infantry (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
July....	3	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
		Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	4	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
		General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
Aug....	5	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	M.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	T.	General quarters.	General quarters.	General quarters.	General quarters.
	W.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
Sept....	Th.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	F.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION

Practice cruise.

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion infantry in place of the regular drill period.

SECOND CLASS.

Aca demic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Target machine guns.	Steam launches.
	2	Battery.	Battery.	Steam launches.	Target machine guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target machine guns.	Steam launches.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Target machine guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec*.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy Signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
Jan*.....	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Signals.	Steam.
	3	Steam.	Broadsword.	Steam.	Signals.
	4	Signals.	Steam.	Broadsword.	Steam.

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SEMI-ANNUAL EXAMINATION.

Feb*....	1	Steam.	Signals.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar....	1	Steam.	Practical ordnance	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4)
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April...	1	General quarters.	General quarters.	General quarters.	General quarters
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Small sword (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target great guns (4).	Small sword (4).	Steam tactics (4).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	Steam tactics (4).	Small sword (4).	Target great guns (4).	Skirmish (4).
	8	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
May....	1	Small sword (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battal'n artillery (3).	Battal'n artillery (3).	Battal'n artillery (3).	Battal'n artillery (3).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	9				
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Small sword.	Small sword.	Small sword.	Small sword.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to {
10 {--

ANNUAL EXAMINATION.

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to battalion infantry, in place of the schedule detail drills.

SECOND CLASS.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers p. m.
	2	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.
	3	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine guns p. m.
	5	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.
	6	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.
	7	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.
	8	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.
	9	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.
	10	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.

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THIRD CLASS.

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Boats.	Boats.
	2	Battery.	Battery.	Boats.	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec*	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan*	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Pivot guns.
	4	Pivot guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
Feb*	1	Target small arms.	Pivot guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar.....	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target sm'll arms(4).	Skirmish (4).	Seamanship (4).	Boats (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target sm'll arms(4).	Boats (4).	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	Seamanship.	Boats (4).	Target sm'll arms(4).	Skirmish (4).
May.....	1	Boats (4).	Seamanship (1).	Skirmish (4).	Target sm'll arms(4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battal'n artillery (3).	Battal'n artillery (3).	Battal'n artillery (3).	Battal'n artillery (3).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
	8	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	9				
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10.	ANNUAL EXAMINATION.				
June 10 to Aug. 28	Practice cruise.				

* During the months of December, January, and February two (2) Saturday drill periods are devoted to battalion infantry in place of the schedule detail drills.

FOURTH CLASS

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Boats	Boats.
	2	Battery.	Battery.	Boats	Boats.
	3	Seamanship.	Seamanship	Seamanship.	Seamanship
	4	Boats.	Boats.	Company.	Company.
Nov....	1	Seamanship.	Seamanship	Seamanship.	Seamanship.
	2	Boats.	Boats	Battery.	Battery
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery
Dec*....	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Pivot guns.	Rigging loft.	Dancing.	Gymnastics
	4				
Jan*....	1	Gymnastics	Pivot guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics	Pivot guns.	Rigging loft
	3	Rigging loft.	Dancing.	Gymnastics.	Pivot guns
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
	5	SEMI-ANNUAL EXAMINATION.			
Feb*....	1	Gymnastics	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing	Gymnastics.	Dancing
	4	Dancing	Rigging loft.	Dancing.	Gymnastics.
Mar....	1	Gymnastics.	Dancing.	Rigging loft.	Dancing
	2	Company (4).	Company (4)	Company (4)	Company (4)
	3	Seamanship (1).	Seamanship (1).	Seamanship (1)	Seamanship (1)
	4	Seamanship	Seamanship.	Seamanship.	Seamanship
April..	1	General quarters.	General quarters.	General quarters.	General quarters
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Gymnastics (4).	Skirmish (4)	Seamanship (4)	Boats (4)
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1)
	5	Skirmish (4)	Gymnastics (4)	Boats (4)	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
	7	Seamanship	Boats (4)	Gymnastics (4)	Seamanship (1)
May.....	1	Boats (4)	Seamanship (1)	Skirmish (4).	Gymnastics (4)
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1)
	3	Battalion infantry (4)	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4)
	4	Seamanship (1)	Seamanship (1)	Seamanship (1)	Seamanship (1)
	5	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3)
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3)
	7	Seamanship (3)	Seamanship (3)	Seamanship (3).	Seamanship (3)
	8	General quarters (3)	General quarters (3)	General quarters (3).	General quarters (3)
	9				
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery
	W	General quarters.	General quarters.	General quarters.	General quarters
	Th	Boats	Boats	Boats	Boats
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry
	S	Seamanship	Seamanship.	Seamanship	Seamanship.
June 1 to 10		ANNUAL EXAMINATION			
June 10 to 20		Practice cruise			
Aug 20 to Sept 10					
Sept 10 to 20	1	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	2	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	3	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	4	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	5	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	6	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	7	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	8	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	9	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	10	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	11	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	12	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	13	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	14	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	15	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	16	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	17	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	18	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	19	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	20	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	21	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	22	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	23	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	24	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	25	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	26	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	27	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	28	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	29	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	30	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	31	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1

* During the months of December, January and February two (2) Saturday drill periods are devoted to battalion infantry in place of the schedule detail drills.
(Swimming day)

SUMMARY OF PRACTICAL INSTRUCTION--Continued.

Kind of instruction	During the academic year.				Total num-ber of in-structions during academic year.	During summer months.				Total num-ber of in-structions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the battalion, infantry	11	11	11	11	44					44
Marksmanship drill	4	4	4	4	16					16
Braced sword	16	9			24					24
Small sword	5	15	18		38					38
Practical instruction in deviation of compass	4				4	(*)				4
Practical instruction, navigating	† 14	† 12				(*)				† 27
Practical instruction, surveying	† 10									† 10
Machine-shop and running shop engines	30 and † 13	30			60		24			114 and † 12
Running steam launches		5			5		6			11
Practical instruction in chemistry			† 12							† 12
Gymnastics and boxing				19	19					19
Swimming									24	24
Dancing				20	20					20

* Practice cruises.

† Study periods.

The instructions in seamanship and gunnery on board of the *Wyoming*, *Passaic*,[†] and *Standish* are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

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ANNUAL REGISTER

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OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FORTY-SEVENTH ACADEMIC YEAR.

1891-'92.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet.
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1882, the official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1883.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanics, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the Academy in 1867. After an interval of four years in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874, and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps: And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year: such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who cannot receive such appointment shall be given a certificate of graduation, an honor-

able discharge, and one year's sea pay, as now provided by law for cadet-midshipmen ; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

“That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the naval academy, with a proper certificate of graduation.”

The act of Congress, approved March 2, 1889, provides that “the academic board of the naval academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy ; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks ; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps ; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course : *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current ; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the naval academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current ; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps ; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available.”

“That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years.”

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SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command :

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Upshur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.
June 30, 1890.—Captain R. L. Phythian.

BOARD OF VISITORS, JUNE, 1891.

Hon. W. E. CHANDLER, U. S. Senate, *President*.

Hon. H. A. HERBERT, U. S. House of Representative, *Vice President*.

Hon. I. G. HARRIS	U. S. Senate.
Hon. J. P. DOLLIVER	U. S. House of Representatives.
Hon. W. C. WALLACE	U. S. House of Representatives.
Commodore J. A. GREER	U. S. Navy.
Hon. GEORGE N. TILLMAN	Nashville, Tennessee.
Hon. A. R. MCGILL	Minneapolis, Minnesota.
Dr. GEORGE W. ATHERTON	Bellefonte, Pennsylvania.
Colonel E. BIERER	Hiawatha, Kansas.
Mr. CHARLES A. COFFIN	Boston, Massachusetts.
Mr. H. H. SMITH	Washington, D. C.

ACADEMIC CALENDAR.
1891-1892.

1891.		
Oct.	1.—Beginning of first term	Thursday.
1892.		
Jan.	25-30.—Semi-annual examination	Monday-Saturday.
Jan.	30.—End of first term	Saturday.
May	16.—Examination of candidates for admission as naval cadets	Monday.
May	31.—End of academic year, 1891-'92	Tuesday.
May 30-June 4.	—Annual examination	Monday-Saturday.
Sept.	1.—Examination of candidates for admission as naval cadets	Thursday.
Oct.	1.—Beginning of first term, 1892-'93	Saturday.

The academic months end on the following days :

1891-1892.			
October	Oct. 31	February	Feb. 27
November	Nov. 28	March	Mar. 27
December	Dec. 26	April	Apr. 25
January	Jan. 23	May	May 21

1892-1893.			
October	Oct. 29	December	Dec. 24
November	Nov. 26	January	Jan. 21

CALENDAR FOR 1891-'92.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
---	---	1	2	3	4	5	---	---	---	---	---	1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	---	---	---	24	25	26	27	28	29	30
OCTOBER.							MAY.						
---	---	---	---	1	2	3	1	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14
11	12	13	14	15	16	17	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28
25	26	27	28	29	30	31	29	30	31	---	---	---	---
NOVEMBER.							JUNE.						
1	2	3	4	5	6	7	---	---	---	1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	---	---	---	---	---	26	27	28	29	30	---	---
DECEMBER.							JULY.						
---	---	1	2	3	4	5	---	---	---	---	---	1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31	---	---	24	25	26	27	28	29	30
---	---	---	---	---	---	---	31	---	---	---	---	---	---
JANUARY.							AUGUST.						
---	---	---	---	---	1	2	---	1	2	3	4	5	6
3	4	5	6	7	8	9	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30	31	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---	---
FEBRUARY.							SEPTEMBER.						
---	1	2	3	4	5	6	---	---	---	---	1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24
28	29	---	---	---	---	---	25	26	27	28	29	30	---
MARCH.							OCTOBER.						
---	---	1	2	3	4	5	---	---	---	---	---	---	1
6	7	8	9	10	11	12	2	3	4	5	6	7	8
13	14	15	16	17	18	19	9	10	11	12	13	14	15
20	21	22	23	24	25	26	16	17	18	19	20	21	22
27	28	29	30	31	---	---	23	24	25	26	27	28	29
---	---	---	---	---	---	---	30	31	---	---	---	---	---

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,
CAPTAIN R. L. PHYTHIAN.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT D. D. V. STUART.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT G. A. MERRIAM.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER C. M. CHESTER.

LIEUTENANT J. M. HAWLEY, Assistant.

LIEUTENANT G. B. HARBER, Assistant and Drill Officer.

LIEUTENANT C. W. BARTLETT, Assistant and Drill Officer.

LIEUTENANT C. D. GALLOWAY, Assistant.

LIEUTENANT R. H. GALT, Assistant and Drill Officer.

LIEUTENANT ALEXANDER SHARP, jr., Assistant and Drill Officer.

LIEUTENANT C. A. GOVE, Assistant and Drill Officer.

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Head of Department,

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Assistants,

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LIEUTENANT C. B. T. MOORE,

LIEUTENANT W. S. BENSON.

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MATTHEW STROHM.

ORDNANCE AND GUNNERY.

Head of Department,

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Assistants,

LIEUTENANT H. C. GEARING,

LIEUTENANT W. F. FULLAM.

Sword Master.

A. J. CORBETTER.

Assistant Sword Masters,

J. B. REITZ,

G. HEINTZ.

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Assistants,

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LIEUTENANT EDWARD LLOYD, JR.

STEAM ENGINEERING.

Head of Department,

CHIEF ENGINEER H. W. FITCH.

Instructors,

PASSED ASSISTANT ENGINEER J. K. BARTON,

PASSED ASSISTANT ENGINEER R. G. DENIG,

PASSED ASSISTANT ENGINEER F. J. SCHELL,

PASSED ASSISTANT ENGINEER J. L. GOW,

ASSISTANT ENGINEER B. C. SANFORD.

MECHANICS AND APPLIED MATHEMATICS.

Head of Department,

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Assistants,

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LIEUTENANT JOHN HOOD,

LIEUTENANT H. B. KNAPP,

ENRICH C. M. KROPP.

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Head of Department,

PROFESSOR N. M. TERRY, A. M., PH. D.

Assistants,

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 LIEUTENANT B. T. WALLING,
 LIEUTENANT O. G. DODGE,
 ENSIGN F. K. HILL,
 PROFESSOR C. R. SANGER, A. M., PH. D.

MATHEMATICS.

Head of Department,

LIEUTENANT-COMMANDER HARRY KNOX.

Assistants,

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 LIEUTENANT J. M. ROPER,
 LIEUTENANT J. M. BOWYER,
 ENSIGN H. G. DRESSEL,
 ENSIGN C. S. WILLIAMS,
 ENSIGN G. R. EVANS.

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COMMANDER J. E. CRAIG.

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 LIEUTENANT E. B. UNDERWOOD,
 LIEUTENANT W. F. HALSEY,
 LIEUTENANT J. O. NICOLSON,
 ENSIGN J. H. GIBBONS,
 PROFESSOR W. W. FAY, A. M.

MODERN LANGUAGES.

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Assistants,

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 PROFESSOR JULES LEROUX,
 ASSISTANT PROFESSOR HIPPOLYTE DALMON,
 ASSISTANT PROFESSOR HENRI MARION,
 ASSISTANT PROFESSOR SAMUEL GARNER, PH. D.

MECHANICAL DRAWING.

Head of Department,

LIEUTENANT H. O. RITTENHOUSE.

Assistants,

LIEUTENANT W. M. IRWIN,
 PROFESSOR MARSHAL OLIVER,
 ASSISTANT PROFESSOR C. F. BLAUVELL.

BRANCH OF PHYSICAL TRAINING.

In Charge,

PASSED ASSISTANT SURGEON HENRY G. BEYER, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

OFFICERS NOT ATTACHED TO ACADEMIC STAFF.

LIEUTENANT W. H. REEDER, *in Charge of Ships.*

MEDICAL INSPECTOR B. H. KIDDER, M. D.

PASSED ASSISTANT SURGEON W. R. DE ROSE, M. D.

PASSED ASSISTANT SURGEON L. W. CURTIS, M. D.

PAY DIRECTOR JAMES FULTON, *Pay Officer.*PAY DIRECTOR CASPAR SCHENCK, *Commissary and General Storekeeper.*

CHAPLAIN H. H. CLARK.

ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*J. M. SPENCER, *Assistant Librarian.*R. M. CHARR, *Secretary.*GUNNER R. SOMMER, *Attached to Ships.*

U. S. Naval Cadet Training and Practice Vessel Enterprise.

COMMANDER C. M. CHESTER, *Commanding.*

BOATSWAIN J. S. SINCLAIR.

Notes,

SAMUEL GEE.

G. J. MURPHY.

B. G. PERRY.

W. G. SMITH.

MARINE OFFICERS.

CAPTAIN J. M. T. YOUNG, *Commanding Marines.*

FIRST LIEUTENANT H. K. WHITE.

ACADEMIC BOARD.

THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH LITERATURE, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY. 19

CADET LIEUTENANT-COMMANDER,

J. E. McDONALD, JR.

CADET LIEUTENANTS,

H. L. FERGUSON,
W. O. DAWSON,

G. C. DAY,
C. T. JEWELL.

CADET LIEUTENANT AND ADJUTANT,

L. S. THOMPSON.

CADET PASSED ASSISTANT ENGINEER,

J. D. BEURET.

CADET MASTERS.

L. McNAMER,
C. L. HUSSEY,

C. F. MACKLIN,
F. L. SAWYER.

CADET ENSIGNS.

J. F. HINES,
J. R. Y. BLAKELY,

G. H. MATHER,
H. A. EVANS.

CADET PETTY OFFICERS OF THE FIRST CLASS.

CADET CHIEF PETTY OFFICER,

J. R. P. PRINGLE.

<i>First Division</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
Y. STIRLING, JR.,	T. S. BORDEN,	J. R. CAMPBELL,	J. SHEEHAN,
F. A. TRAUT,	F. R. PAYNE,	B. B. MCCORMICK,	E. S. KELLOGG,
T. H. LOW,	G. O. DAVISON,	G. MALLISON,	J. T. MYERS,
J. H. RUSSELL, JR.	T. L. STITT,	W. BALL,	A. B. DAVIS,
	D. VAN H. ALLEN.	P. SYMINGTON.	A. L. GAMBLE.

CADET PETTY OFFICERS OF THE SECOND CLASS,

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
W. S. MONTGOMERY,	L. J. MAGILL,	F. H. CLARK, JR.,	D. O. NUTTING, JR.,
T. D. PARKER,	W. S. CROSLY,	D. M. BERRY,	H. A. PEARSON,
C. E. FITCH,	W. VAN N. POWELSON,	C. J. LANG,	T. S. KELLOGG,
J. A. PERRY.	M. B. PRUGHET.	F. B. UPHAM.	C. WELLS.

SUMMER CRUISE, 1891.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP CONSTELLATION.

June 6 to August 25.

COMMANDER C. M. CHESTER, *Commanding.*
LIEUTENANT J. M. HAWLEY, *Executive Officer.*
LIEUTENANT J. C. CRESAP, *Navigator.*
LIEUTENANT E. B. UNDERWOOD, *Watch Officer.*
LIEUTENANT C. B. T. MOORE, *Watch Officer.*
LIEUTENANT A. SHARP, JR., *Watch Officer.*
LIEUTENANT H. C. GEARING, *Instructor in Navigation.*

LIEUTENANT B. T. WALLING, *Watch Officer.*
ENSIGN C. S. WILLIAMS, *Watch Officer.*
SURGEON S. H. DICKSON.
PASSED ASSISTANT SURGEON L. M. CURTIS.
ASSISTANT PAYMASTER J. A. MUDD.
CHAPLAIN H. H. CLARK.

NAVAL CADETS.

First Class—Line Division.

Allen, D. Van H.,
Ball, W.,
Blakely, J. R. Y.,
Borden, T. H.,
Campbell, J. R.,
Davis, A. R.,
Davison, G. C.,
Dawson, W. C.,
Day, G. C.,
Evans, H. A.,
Ferguson, H. L.,
Gamble, A. L.,

**Hines, J. F.,
Hussey, O. L.,
Jewell, O. T.,
Kellogg, E. S.,
Low, T. H.,
McCormick, R. B.,
McDonald, J. E., Jr.,
Macklin, C. F.,
McNamee, L.,
Mallison, G.,
Mather, G. H.,
Myers, J. T.,**

Payne, F. R.,
Pringle, J. R. P.,
Rice, A.,
Russell, J. H., jr.,
Sawyer, F. L.,
Sheehan, J.,
Stirling, Y., jr.,
Stitt, T. L.,
Stopford, F. W.,
Symington, P.,
Thompson, L. S.,
Traut, F. A.

Third Class

A. Adams, L. S.,
Baldin, P.,
Baker, H. T.,
Bates, E. L.,
Bennett, E. L.,
Berryman, J. R., (a)
Bookwalter, C. S.,
Bulmer, R. C.,
Chappell, R. H.,
Chester, A. T., (b)
Churchill, W.,
Cone, H. I.,
Casper, I. T.,
Cox, D. H.,
Crosby, B. G.,
DeLany, K. H.,
England, C.,
Fullinwider, S. P.,
Galbraith, G. S.,
Gelm, G. K.,
Gillis, L. Van G.,

Graham, S. V.,
Griffith, C. W.,
Hinds, A. W.,
Hudgins, J. M.,
Hull, A. T.,
James, L. F.,
Johnson, M. K.,
Jones, I. Burton,
Kavanaugh, A. G.,
Lallich, P. M.,
Lane, C. A.,
Luby, J. McO.,
Lyon, F.,
McLean, R.,
McMorris, R. K.,
McNeely, R. W.,
Manton, W. J.,
Meady, H. C.,
Osburn, R. H.,
Perkins, F. K., (w)
Reeves, J. M.,

Ridgely, R. J.,
Robert, W. P.,
Roberts, T. G.,
Ryan, G. W., (a)
Sandoz, F. L.,
Scott, W. P.,
Sellers, D. F.,
Shaw, M. J.,
Snow, O. F.,
Spear, R.,
Stone, G. L. P.,
Stone, R.,
Tompkins, J. T.,
Turpin, W. S.,
Walker, H. M.,
Webster, C.,
Whitted, W. S.,
Winn, P. B.,
Winship, R.

Fourth Class.

Baldwin, G. E.,
Bannon, P. M.,
Blandy, E. C.,
Cress, A. J.,
Evans, E. A.,
Hane, J. P.,
Fairbairn, A. L., &

Garriann, D. M.,
Harrison, B. W.,
Lanling, H.,
Liscom, A. C.,
Love, J. M.,
Mann, G. H.,
Martin, N. M.,

**Pratt, P. L.,
Shea, P. T.,
Vestal, N. G.,
Washington, Pope,
White, H. H.**

SYNOPSIS OF THE CRUISE, 1891.

CONSTELLATION.

1. Left, first class, first division, and the third and fourth classes embarked June 6.
 2. Left from Annapolis June 12.
 3. Arrived at Hampton Roads June 17.
 4. Passed Cape Henry, bound to New London, Conn., June 22.
 5. Arrived at New London, Conn., June 27.
 6. Were requested to join the squadron of evolution, July 29.
 7. Took to sea toward target practice of a squadron of evolution July 29.
 8. Took to sea toward evolution, naval target, a squadron of evolution at Fisher Island July 30.
 9. Took to sea toward instruction at target station A at 10 and 11.
 10. Remained in Long Island Sound and vicinity until August 17.
 11. Left New York for Annapolis August 17.
 12. Passed Cape Henry bound to Annapolis, August 23.
 13. Arrived at Annapolis August 24.
 14. Took to sea unmarshaled August 24.

1. Transferred to Naval Hospital, New York, July 20.
 2. Granted leave from ship on July 25.
 3. Granted leave from ship on August 11.

NAVAL CADETS RETAINED AT THE ACADEMY FOR MACHINE SHOP AND OTHER PRACTICAL INSTRUCTION.

First Class—Engineer Division.

Beuret, J. D.,	Hambrouck, R. De L.,	Moses, S. E.,
Crank, R. K.,	Huffington, H. W.,	Porter, J. S.
Gibbs, W. D., (r)		

Second Class.

Berry, D. M.,	Hains, P. O., jr.,	Powell, W. G.,
Bisset, E. L.,	Hoblitzelle, W. E.,	Powelson, W. Van N.,
Brady, J. R.,	Holsinger, G. L.,	Pratt, A. A.,
Campbell, E. H.,	Jackson, O. P.,	Price, H. B.,
Carver, M.,	Kellogg, T. S.,	Procter, A. M.,
Chadwick, F. L.,	Lang, C. J.,	Read, F. De W.,
Clark, F. H., jr.,	McKethan, A. A.,	Rodney, W., (g)
Coleman, J. S.,	Magill, L. J.,	Ryan, J. P. J.,
Cook, A. M.,	Montgomery, W. S.,	Scott, G. T.,
Crocker, J. A.,	Morris, J. R.,	Sticht, J. L.,
Crosley, W. S.,	Nutting, D. O., jr.,	Sturdevant, R.,
Doddridge, J. S.,	Olmsted, P. N.,	Trench, M. E.,
Douglas, E. S.,	Parker, T. D.,	Upham, F. B.,
Elder, E. A., (f)	Pearson, H. A.,	Ward, H. H.,
Fewel, O. O.,	Perry, J. A.,	Wells, O.,
Fitch, O. E.,	Peugnet, M. B.,	Whitman, W. B.,
Gise, W. K.,	Pollock, E. R.,	Wilson, T. S.,
Groff, J. O.,	Potter, J. B.,	Zillman, O. O. H. (m)

Third Class.

Jones, L. Benson.

Fourth Class.

Takasaki Motohiko.

ON LEAVE SICK.

- Third Class, Asbury, L. G., May 29 to September 20.
- Fourth Class, Billings, F. T., June 7 to August 29.
- Fourth Class, Emery, A. B., May 25 to September 1.
- Fourth Class, DeJarnette, J. D. C., March 15 to May 15, May 22 to September 30.

SUMMARY.

On board United States Practice Ship <i>Constellation</i>	116
Remaining at the Academy	63
Total	179

- f Granted leave June 23 to September 30.
- g Granted leave March 12 to September 28.
- m Granted leave June 1 to September 20.
- r Resigned September 3.

CLASSES OF THE NAVAL CADETS

AT THE BEGINNING OF THE ACADEMIC YEAR, 1891-'92.

(Corrected to November 18, 1891.)

Naval cadets of the class appointed in 1886, performing required service afloat—Law-
Division—31 members.

Order of Gen- eral merit.	Name.	State from which appointed.	Date of admission.
01	Rahn, Thomas Francis	Tennessee	May 20, 1886
02	Spear, Lawrence	Ohio	May 17, 1886
3	Coleman, Noah Tunnicliff	New York	May 21, 1886
4	Schofield, Frank Herman	New York	May 21, 1886
5	Cham, John Valentine	Louisiana	Sept. 28, 1886
6	Gartley, Alonso	Iowa	May 22, 1886
7	Ziegemeier, Henry Joseph	Ohio	May 21, 1886
8	Davis, Cleland	Kentucky	May 22, 1886
9	Signor, Matt Howland	Nebraska	May 21, 1886
10	Blankenship, John Millington	Virginia	May 20, 1886
11	Buck, William Henry	Mississippi	May 22, 1886
12	Taylor, Montgomery Meigs	At large	May 21, 1886
13	Ritter, Henry Snyder	Pennsylvania	May 22, 1886
14	Williams, George Washington	South Carolina	Sept. 29, 1886
15	Castlin, Albertus Wright	Minnesota	May 24, 1886
16	McVay, Charles Butler, jr	Colorado	May 19, 1886
17	Vogelgsang, Charles Theodore	California	Sept. 6, 1886
18	Everhart, Lay Hampton	Alabama	May 21, 1886
19	Snow, William Alanson	Massachusetts	Sept. 6, 1886
20	Sullivan, Franklin Buchanan	At large	May 22, 1886
21	Bailey, Claude	Arkansas	Sept. 9, 1886
22	Neville, Wendell Cushing	Virginia	Sept. 12, 1886
23	Mims, Lawrence Henry	New York	Sept. 29, 1886
24	Dayton, John Havens	At large	Sept. 12, 1886
25	Burwick, Lucius Allyn	Massachusetts	Sept. 7, 1886
26	Bond, Charles Otis	Iowa	Sept. 8, 1886
27	Radford, Cyrus Sarg	Kentucky	May 22, 1886
28	Treadwell, Thomas Conrad	Massachusetts	May 21, 1886
29	Moffett, William Adger	South Carolina	Sept. 6, 1886
30	Lattimer, Julius Lane	West Virginia	Sept. 28, 1886
31	Edie, John Rufus	At large	May 19, 1886

Engineer Division, 3 members.

1	Holmes, Urban Tignor	Arkansas	Sept. 11, 1886
2	Price, Claude Bernard	Mississippi	June 2, 1886
3	Dismukes, Doctor Eugene	Mississippi	May 21, 1886

*Naval cadets of the class appointed in 1887, performing required service afloat—Line
Division—36 members.*

Order of gen- eral merit.	Name.	State from which appointed.	Date of ad- mission.
*1	Zahn, Frank Baker.....	Pennsylvania.....	Sept. 5, 1887
*2	Gillmer, Horatio Gonzalo.....	Wisconsin.....	Sept. 5, 1887
*3	Smith, Henry Gerrish.....	Ohio.....	Sept. 5, 1887
*4	Watt, Richard Morgan.....	Pennsylvania.....	Sept. 22, 1887
*5	Belknap, Reginald Rowan.....	Arkansas.....	Sept. 5, 1887
*6	Blamer, DeWitt.....	Iowa.....	May 19, 1887
7	Stearns, Clark Daniel.....	Michigan.....	Sept. 5, 1887
8	Pollock, Edwin Taylor.....	Ohio.....	May 20, 1887
9	Kuenzli, Henry Charles.....	Wisconsin.....	Sept. 6, 1887
10	Willard, Arthur Lee.....	Missouri.....	Sept. 7, 1887
11	Christy, Harley Hannibal.....	Ohio.....	May 24, 1887
12	Hartung, Benwick John.....	Iowa.....	Sept. 6, 1887
13	Hough, Henry Hughes.....	Massachusetts.....	Sept. 6, 1887
14	Irwin, Noble Edward.....	Ohio.....	Sept. 29, 1887
15	Smith, Lucien Greathouse.....	Illinois.....	June 3, 1887
16	Evans, Waldo.....	Kansas.....	Sept. 7, 1887
17	Moale, John Gray Foster.....	California.....	Sept. 6, 1887
18	McLemore, Albert Sidney.....	Tennessee.....	May 23, 1887
19	Senn, Thomas Jones.....	South Carolina.....	May 19, 1887
20	Bierer, Bion Barnett.....	Kansas.....	Sept. 24, 1887
21	Caldwell, Harry Handly.....	Illinois.....	Sept. 7, 1887
22	Preston, Charles Francis.....	Maryland.....	Sept. 6, 1887
23	Williams, Dion.....	Ohio.....	July 16, 1887
24	Lane, Rufus Herman.....	Ohio.....	June 2, 1887
25	Sypher, Jay Hale.....	Arizona.....	Sept. 5, 1887
26	Leigh, Richard Henry.....	Mississippi.....	Sept. 6, 1887
27	Macfarland, Horace Greeley.....	New York.....	Sept. 6, 1887
28	Brotherton, William Daniel.....	Wisconsin.....	Sept. 6, 1887
29	Althouse, Adelbert.....	Illinois.....	May 21, 1887
30	Carter, James Francis.....	Pennsylvania.....	March 24, 1887
31	McKelvy, William Nessler.....	Pennsylvania.....	May 20, 1887
32	Smith, Harry Eaton.....	Ohio.....	May 20, 1887
33	Theall, Elisha.....	New York.....	May 23, 1887
34	Blount, Irving.....	Indiana.....	Sept. 6, 1887
35	Richards, George.....	Ohio.....	Sept. 12, 1887
36	Gross, Louis Herman.....	Illinois.....	May 19, 1887

Engineer Division—7 members.

1	Robison, John Keeler.....	Michigan.....	May 20, 1887
2	Rowen, John Howard.....	Pennsylvania.....	Sept. 27, 1887
3	Reed, Milton Eugene.....	Iowa.....	Sept. 5, 1887
4	Emrich, Charles Rulf.....	Illinois.....	May 19, 1887
5	McGrann, William Hugh.....	Tennessee.....	May 20, 1887
6	Shepard, George Hugh.....	Wisconsin.....	Sept. 27, 1887
7	Laws, George William.....	Iowa.....	May 21, 1887

Naval Cadets of the First Class—Line Division—34 members.

Name.	State from which appointed.	Date of admission.	Time served in previous assignment.	
			Months.	Days.
Allen, David Van Horn	Tennessee	Sept. 6, 1887	8	5
Ball, Walter	New York	Sept. 6, 1888	4	5
Blakely, John Russell Young	Pennsylvania	Sept. 29, 1888	4	5
Burden, Thomas Sheppard	Louisiana	Sept. 26, 1888	4	5
Campbell, Joseph Randolph	Wyoming	Sept. 29, 1888	4	5
Davis, Austin Rockwell	Georgia	May 21, 1888	7	1
Davison, Gregory Caldwell	Missouri	May 22, 1888	7	1
Dawson, William Charles	Missouri	Sept. 6, 1888	4	5
Day, George Calvin	Vermont	May 19, 1888	7	1
Evans, Holden A.	Florida	Sept. 5, 1888	4	5
Ferguson, Homer Lenoir	North Carolina	May 21, 1888	7	1
Gamble, Aaron Lichtenberger	Indiana	Sept. 5, 1888	4	5
Hines, John Vire	Kentucky	May 1, 1888	7	1
Hussey, Charles Lincoln	New Hampshire	May 21, 1888	7	1
Jewell, Charles Theodore	At large	May 19, 1887	7	1
Kellogg, Edward Stanley	New York	Sept. 5, 1888	3	5
Low, Theodore Henry	Connecticut	May 18, 1888	7	1
McCormick, Benjamin Bernard	New York	May 19, 1888	7	1
McDonald, Joseph Ezekiel	Illinois	Sept. 7, 1888	4	5
Macklin, Charles Fearn	New York	Sept. 25, 1888	4	5
McNamee, Luke	Kansas	Sept. 6, 1888	4	5
Mallison, George	North Carolina	May 21, 1888	7	1
Mather, George Herbert	New Jersey	May 22, 1888	7	1
Myers, John Twigg	Georgia	Sept. 27, 1887	5	1
Payne, Fred Rounselle	New York	May 21, 1888	7	1
Pringle, Joel Roberts Pomeroy	Illinois	Sept. 6, 1888	4	5
Russell, John Henry, Jr.	At large	May 18, 1888	5	1
Sawyer, Frank Rich Lewis	Illinois	Sept. 6, 1888	4	5
Sheehan, James	New York	May 21, 1888	7	1
Stirling, Yaire, Jr.	Massachusetts	Sept. 6, 1888	4	5
Stitt, Thomas Lutz	Indiana	Sept. 5, 1888	4	5
Symington, Powers	West Virginia	Sept. 17, 1888	4	5
Thompson, Leon Seymour	Ohio	May 21, 1888	7	1
Trust, Frederick Augustus	Connecticut	May 19, 1888	7	1

Engineer Division—6 members.

Buratt, John Douglas	Ohio	Sept. 7, 1888	1	5
Crabb, Robert Kyle	Texas	Sept. 6, 1888	1	5
Hedrick, Raymond De Lancy	Idaho	Sept. 25, 1888	1	5
Houston, Howard Williams	Pennsylvania	May 19, 1888	4	5
Mason, Sanford Elwood	Georgia	Sept. 6, 1888	1	5
Porter, John Angleton	Tennessee	Sept. 25, 1888	1	5

Naval Cadets of the Second Class—51 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Berry, David Mark	California	Sept. 6, 1889	2	22
Bisnet, Eugene Leo	Kentucky	Oct. 2, 1889	2	22
Brady, John Richard	Pennsylvania	Sept. 6, 1889	2	22
Campbell, Edward Hale	Indiana	Sept. 6, 1889	2	22
Carver, Marvin	Minnesota	Sept. 27, 1889	2	22
Chadwick, Frank Laird	Minnesota	May 18, 1889	4	19
Clark, Frank Hodges, jr	Rhode Island	Sept. 5, 1889	2	22
Coleman, James Samuel	Alabama	Sept. 5, 1889	2	22
Cook, Allen Merriam	Kansas	May 22, 1889	4	14
Crocker, John Archdell	Pennsylvania	May 22, 1889	4	19
Crosley, Walter Selwyn	Connecticut	Sept. 9, 1889	2	22
Doddridge, John Sehon	West Virginia	Sept. 7, 1889	2	22
Douglas, Richard Spencer	Georgia	June 3, 1889	4	19
Elder, Edwin Avery	Massachusetts	May 21, 1889	4	19
Fewel, Christopher Catron	Texas	Oct. 2, 1889	2	22
Fitch, Claude Eames	Illinois	Sept. 7, 1889	2	22
Gise, William Kern	Illinois	June 14, 1889	4	19
Groff, Joseph Coblentz	Maryland	Oct. 3, 1889	2	22
Hains, Peter Conover, jr	District of Columbia	May 18, 1889	4	19
Holsinger, Gerald Long	Kansas	Oct. 3, 1889	2	22
Jackson, Orton Porter	Pennsylvania	May 18, 1889	4	19
Kellogg, Thomas Steele	At large	Oct. 19, 1889	2	22
Lang, Charles Jonas	Pennsylvania	Sept. 6, 1889	2	22
McKethan, Alfred Augustus	North Carolina	Sept. 5, 1889	2	22
Magill, Louis John	Pennsylvania	Nov. 11, 1889	2	22
Montgomery, William Slack	Kentucky	Sept. 5, 1889	2	22
Morris, John Ramsey	Missouri	Sept. 7, 1889	2	22
Nutting, Daniel Chapin, jr	Kansas	May 21, 1889	4	19
Olmsted, Percy Napier	Oregon	May 21, 1889	1	27
Parker, Thomas Drayton	South Carolina	Oct. 3, 1889	2	22
Pearson, Henry Allen	Utah	Sept. 6, 1889	2	22
Perry, Joseph Albert	Illinois	Sept. 6, 1889	2	22
Peugnet, Maurice Berthold	Missouri	Sept. 7, 1889	2	22
Pollock, Emmett Riddle	Illinois	May 18, 1888	4	17
Potter, James Boyd	New Jersey	Sept. 5, 1889	2	22
Powell, William Glasgow	New Jersey	May 18, 1889	2	22
Powelson, Wilfrid Van Nest	New York	Sept. 5, 1889	2	22
Pratt, Alfred Allen	Illinois	Sept. 7, 1889	2	22
Price, Henry Bertrand	Iowa	May 20, 1889	4	14
Procter, André Morton	Kentucky	Sept. 6, 1889	2	22
Read, Frank De Witt	Ohio	Sept. 6, 1889	2	22
Rodney, Warren	Texas	Sept. 6, 1888	1	27
Ryan, John Paul Joseph	New York	May 22, 1889	2	22
Scott, Guy Terrell	Nebraska	Sept. 7, 1889	2	22
Sticht, John Low	New York	Sept. 7, 1889	2	22
Sturdevant, Richard	Pennsylvania	Sept. 6, 1889	2	22
Trench, Martin Edward	Minnesota	Oct. 3, 1889	2	22
Upham, Frank Brooks	Montana	Sept. 6, 1889	2	22
Ward, Henry Heber	New Jersey	Sept. 7, 1889	2	22
Wells, Chester	Pennsylvania	Nov. 15, 1889	0	0
Wilson, Thomas Sheldon	Illinois	May 20, 1889	4	1

Naval Cadets of the Third Class—61 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships	
			Months.	Days.
Adams, Lawrence Stowell.....	Pennsylvania.....	Sept. 20, 1890	2	23
Babin, Provost.....	New York.....	Sept. 6, 1890	2	0
Baker, Henry Thomas.....	Ohio.....	Oct. 7, 1890	2	12
Bennett, Ernest Linwood.....	Massachusetts.....	Sept. 24, 1890	2	12
Berryman, John Russell.....	Ohio.....	May 22, 1890	2	0
Bookwalter, Charles Sumner.....	Illinois.....	Sept. 8, 1890	2	12
Bulmer, Roscoe Carlyle.....	Nevada.....	Sept. 26, 1890	2	0
Chappell, Ralph Hubert.....	Michigan.....	May 22, 1890	2	12
Chester, Arthur Tremaine.....	At large.....	May 19, 1890	1	13
Churchill, Winston.....	Missouri.....	May 21, 1890	2	0
Cone, Hutch Ingham.....	Florida.....	Sept. 8, 1890	2	0
Cooper, Ignatius Taylor.....	Delaware.....	May 20, 1890	2	0
Cox, Daniel Hargate.....	New York.....	Sept. 9, 1890	2	12
Crosby, Benjamin Gratz.....	At large.....	Sept. 26, 1890	2	0
De Lany, Edwin Hayden.....	Tennessee.....	May 21, 1890	2	12
England, Clarence.....	Arkansas.....	Sept. 8, 1890	2	15
Fullinwider, Simon Peter.....	Missouri.....	May 21, 1890	2	15
Galbraith, Gilbert Smith.....	Pennsylvania.....	Sept. 8, 1890	2	0
Gelm, George Earl.....	New York.....	May 22, 1890	2	0
Gillis, Ervin Van Gorder.....	New York.....	Sept. 6, 1890	2	12
Graham, Steven Victor.....	Michigan.....	May 19, 1890	2	12
Griffith, Claude Willis.....	Maryland.....	Sept. 8, 1890	2	12
Hinds, Alfred Walton.....	Alabama.....	Sept. 6, 1890	2	0
Hudgins, John Melton.....	Virginia.....	Sept. 8, 1890	2	0
Hull, Alexander Thomas.....	Virginia.....	May 21, 1890	2	0
James, Leland Frierson.....	South Carolina.....	Sept. 9, 1890	2	0
Johnson, Moulton Kinsinger.....	Ohio.....	June 10, 1890	2	12
Jones, Lewis Benson.....	New York.....	May 21, 1890	4	16
Jones, Lewis Burton.....	New York.....	May 21, 1890	2	12
Kavanagh, Arthur Glynn.....	Nebraska.....	May 20, 1890	2	12
LaBach, Paul Mayer.....	North Dakota.....	Sept. 20, 1890	2	20
Lane, Charles Arthur.....	Missouri.....	May 20, 1890	2	0
Luby, John McClane.....	Texas.....	Sept. 6, 1890	2	0
Lyon, Frank.....	Kentucky.....	May 20, 1890	2	24
McLenn, Ridley.....	Tennessee.....	May 20, 1890	2	12
McMorris, Bulfinch Kavanaugh.....	Alabama.....	Sept. 15, 1890	2	12
McNewly, Robert Whitehead.....	North Carolina.....	Sept. 8, 1890	2	12
Manion, Walter James.....	Louisiana.....	Sept. 6, 1890	2	12
Moody, Roscoe Charles.....	Maine.....	Sept. 8, 1890	2	12
Osborn, Robert Hatfield.....	New York.....	May 22, 1890	2	12
Parkins, Frederick King.....	California.....	June 11, 1890	2	0
Reever, Joseph Marcus.....	Illinois.....	Sept. 8, 1890	2	12
Ridgely, Randolph, Jr.....	Georgia.....	May 21, 1890	2	12
Robert, William Pierre.....	Mississippi.....	May 20, 1890	2	12
Roberts, Thomas Gaines.....	Alabama.....	May 17, 1890	2	12
Ryan, George Whitaburns.....	Massachusetts.....	June 12, 1890	4	0
Sanders, Fritz Louis.....	Louisiana.....	May 19, 1890	2	12
Scott, William Pitt.....	Pennsylvania.....	May 20, 1890	2	12
Sellon, David Foote.....	New Mexico.....	May 21, 1890	2	0
Show, Melville Jones.....	Minnesota.....	Sept. 6, 1890	2	12

Naval Cadets of the Third Class—61 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Snow, Carlton Farwell	Maine	May 19, 1890	2	23
Spear, Roscoe	Pennsylvania	May 23, 1890	2	23
Stone, George Loring Porter	Georgia	Sept. 26, 1890	2	23
Stone, Raymond	Alabama	Sept. 5, 1890	2	23
Tompkins, John Thomas	Louisiana	Sept. 6, 1890	2	23
Turpin, Walter Stevens	Maryland	May 22, 1890	2	23
Walker, Henry Mallory	South Dakota	Sept. 8, 1890	2	23
Webster, Charles	Massachusetts	Sept. 6, 1890	2	23
Whitted, William Scott	North Carolina	May 20, 1890	2	22
Winn, Philip Bird	Kentucky	Sept. 12, 1890	2	23
Winship, Emory	Georgia	June 3, 1890	2	23

Naval Cadets of the Fourth Class—84 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Time served in previous ships.	
			Years.	Months.	Months.	Days.
Allison, Louis Deuch	Michigan	Sept. 9, 1891	19	4	0	0
Bagley, Worth	North Carolina	Sept. 7, 1891	17	5	0	0
Baldwin, Frank Pardee	New Jersey	Sept. 8, 1891	17	11	0	0
Baldwin, George Ellsworth	Missouri	May 21, 1891	19	4	2	11
Bannon, Philip Michael	Maryland	May 19, 1891	19	2	2	21
Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1891	19	8	0	0
Bennett, Kenneth Marratt	New Jersey	Sept. 8, 1891	19	9	0	0
Bigelow, Harry Maurice	Maine	Sept. 8, 1891	18	11	0	0
Billings, Frederick Tremaine	New York	May 22, 1891	17	10	0	0
Blandy, Edwin Chauncey	Pennsylvania	May 19, 1891	18	8	2	23
Breckinsidge, Joseph Cabell	Kentucky	Sept. 8, 1891	19	6	0	0
Brumby, Frank Harleman	Georgia	Sept. 8, 1891	16	11	0	0
Butler, Henry Varnum, Jr.	New York	Sept. 5, 1891	17	6	0	0
Carmody, Robert Ethridge	New York	Sept. 12, 1891	17	10	0	0
Crane, Andrew Jackson, Jr.	Pennsylvania	May 22, 1891	18	4	2	21
Cushman, William Reynolds	New York	Sept. 5, 1891	16	4	0	0
Davidson, William Christopher	South Dakota	Sept. 28, 1891	19	2	0	0
Deane, Russell Andrews	New York	May 19, 1891	17	0	2	23
De Jarnette, James Daniel Coleman	Virginia	Sept. 8, 1890	17	9	0	0
Dennett, Stanley Pullen	Maine	Sept. 5, 1891	18	2	0	0
Dick, Thomas Murritt	South Carolina	Sept. 5, 1891	18	5	0	0
Doane, Eugene Prince	New York	May 22, 1891	15	6	2	23
Dunn, Edward Howard	Connecticut	Sept. 5, 1891	18	5	0	0
Eckhardt, Ernst Frederick	Wisconsin	Sept. 5, 1891	18	9	0	0
Emery, Arthur Ballard	New Hampshire	May 21, 1890	17	7	0	0
Fairbrother, Arthur Lewis	Rhode Island	May 21, 1891	17	11	1	20
Fellows, Richard J.	Michigan	Sept. 29, 1891	19	10	0	0
Freeman, Frederic Newton	Indiana	Sept. 9, 1891	15	9	0	0
Garrison, Daniel Merwin	New Jersey	June 1, 1891	17	1	2	21
Gherardi, Walter Rockwell	At large	Sept. 4, 1891	16	1	0	0
Gordon, Walter Ingels	Indiana	Sept. 24, 1891	18	1	0	0
Groesbeck, William Gerard	Ohio	Sept. 4, 1891	17	0	0	0
Hall, West Hamill	Texas	Sept. 7, 1891	18	8	0	0
Harrison, Bruce William	Wisconsin	May 21, 1891	18	10	2	21
Henry, James Buchanan, Jr.	New York	Sept. 22, 1891	15	8	0	0
Houk, Herman Whitelaw	Kansas	Sept. 10, 1891	19	4	0	0
Inard, Walter Blake	South Carolina	Sept. 7, 1891	18	2	0	0
Johnston, Rufus Zeno, Jr.	North Carolina	Sept. 10, 1891	17	2	0	0
Karna, Franklin D.	Ohio	Sept. 30, 1891	17	9	0	0
Kearney, Thomas Albert	Missouri	Sept. 8, 1891	16	6	0	0
Klemann, John Valentine	New York	Sept. 10, 1891	15	10	0	0
Knepper, Otto Smith	Pennsylvania	Sept. 4, 1891	16	3	0	0
Lanning, Harris	Illinois	May 19, 1891	17	7	2	21
Larson, Arthur Clark	Michigan	May 20, 1891	17	4	2	23
Leve, James Monroe, Jr.	Virginia	May 20, 1891	16	3	2	21
McGinnis, Michael James	Michigan	Sept. 8, 1891	17	10	0	0
McKay, Frank Lealige	Michigan	Sept. 30, 1891	17	2	0	0
Mallory, Charles King	Tennessee	Sept. 25, 1891	16	1	0	0
Mallory, Hugh	Alabama	Sept. 9, 1891	19	10	0	0
Mann, George Hiram	Pennsylvania	Sept. 6, 1891	18	2	2	23
Meadell, Newton	Ohio	Sept. 7, 1891	17	11	0	0
Mell, John Francis, Jr.	Texas	Sept. 8, 1891	17	6	0	0

Naval Cadets of the Fourth Class—84 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Martin, Nathaniel Macon	Virginia	May 19, 1891	19	8	2	23
Merritt, Darwin Robert	Iowa	Sept. 10, 1891	19	4	0	0
Mitchell, Mason Edward	Arkansas	Sept. 9, 1891	17	8	0	0
Monaghan, John Robert	Washington	Sept. 7, 1891	18	6	0	0
Morgan, Alfred	Missouri	Sept. 8, 1891	19	6	0	0
Morton, James Proctor	Missouri	Sept. 9, 1891	17	7	0	0
Noyes, Lauren Addison	Wisconsin	Sept. 10, 1891	18	8	0	0
Olsen, Mack Herman	Wisconsin	Sept. 10, 1891	17	11	0	0
Pratt, Peter Lloyd	Iowa	May 19, 1891	16	6	2	23
Raby, James Joseph	Michigan	Sept. 9, 1891	16	11	0	0
Rucker, William James	Illinois	Sept. 12, 1891	18	4	0	0
Sayers, Joseph Draper, jr	New York	Sept. 5, 1891	16	6	0	0
Shea, Patrick Francis	New York	May 21, 1891	18	3	2	23
Sheffield, Fletcher Lamar	Georgia	Sept. 7, 1891	15	6	0	0
Shirley, Rufus	New York	Sept. 9, 1891	18	1	0	0
Smith, Stuart Farrar	Pennsylvania	Sept. 4, 1891	16	10	0	0
Standley, William Harry	California	Sept. 7, 1891	18	8	0	0
Takasaki, Motohiko	Empire of Japan	May 20, 1891	17	9	0	0
Terrell, William Alford	Texas	Sept. 24, 1891	19	2	0	0
Todd, David Wooster	California	Sept. 8, 1891	17	2	0	0
Vestal, Samuel Curtis	Indiana	May 19, 1891	18	1	2	23
Volkmar, Walter Schuyler	Pennsylvania	Sept. 4, 1891	17	3	0	0
Vollmer, Frederick	Iowa	Sept. 10, 1891	16	11	0	0
Wadhams, Albion James	New York	Sept. 4, 1891	16	4	0	0
Walker, Charles Henry	Massachusetts	Sept. 8, 1891	17	10	0	0
Walker, James Erling	North Carolina	Sept. 7, 1891	17	0	0	0
Washington, Pope	North Carolina	May 29, 1891	18	8	2	23
Watson, Edward Howe	Kentucky	Sept. 7, 1891	17	6	0	0
White, Henry Harrison	Iowa	May 21, 1891	18	6	2	23
Williams, Harry Craig	Mississippi	Sept. 9, 1891	16	7	0	0
Winfield, John Buckner	Virginia	Sept. 8, 1891	15	10	0	0
Woods, Edward	Massachusetts	Sept. 8, 1891	15	9	0	0

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

November 18, 1891.

		Members.
First Class	Line Division	34
	Engineer Division	6
Second Class		51
Third Class		61
Fourth Class		84
Total		236

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RELATIVE STANDING OF NAVAL CADETS FOR 1890-'91.

Classes of the Naval Cadets at the United States Naval Academy, at the close of the Academic year 1890-'91; with the relative standing of the members in each class, as determined at the annual examination, June, 1891.

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for Engineer Division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick.

Relative Standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.
90	Allen, David Van Horn.....	Tennessee.....	Sept. 6, 1887.
31	Althouse, Adelbert.....	Illinois.....	May 21, 1887.
94	Belknap, Reginald Rowan.....	Arkansas.....	Sept. 8, 1887.
25	Bierer, Elton Barnett.....	Kansas.....	Sept. 24, 1887.
6	Blamer, De Witt.....	Iowa.....	May 19, 1887.
39	Blount, Irving.....	Indiana.....	Sept. 6, 1887.
32	Brotherton, William Daniel.....	Wisconsin.....	Sept. 6, 1887.
21	Caldwell, Harry Handy.....	Illinois.....	Sept. 7, 1887.
27	Carter, James Francis.....	Pennsylvania.....	Mar. 24, 1887.
17	Christy, Harley Hannibal.....	Ohio.....	May 24, 1887.
14	Evans, Waldo.....	Kansas.....	Sept. 7, 1887.
122	Flowers, Robert Lee.....	North Carolina.....	Sept. 7, 1887.
92	Gillmer, Horatio Gonzalo.....	Wisconsin.....	Sept. 8, 1887.
17	Grice, Louis Herman.....	Illinois.....	May 19, 1887.
12	Hartung, Benwick John.....	Iowa.....	Sept. 6, 1887.
13	Hough, Henry Hughes.....	Massachusetts.....	Sept. 6, 1887.
16	Irwin, Noble Edward.....	Ohio.....	Sept. 23, 1887.
134	Kochersperger, Frank Henry.....	Pennsylvania.....	May 20, 1888.
10	Kuenelt, Henry Charles.....	Wisconsin.....	Sept. 6, 1887.
24	Lane, Rufus Herman.....	Ohio.....	June 2, 1887.
28	Leigh, Richard Henry.....	Mississippi.....	Sept. 6, 1887.
15	Macfarland, Horace Greeley.....	New York.....	Sept. 6, 1887.
35	McKee, William Newler.....	Pennsylvania.....	May 20, 1887.
33	McLennan, Albert Schuyler.....	Tennessee.....	May 21, 1887.
21	Macle, John Gray Foster.....	California.....	Sept. 6, 1887.
111	Noble, Daniel Benjamin.....	Indiana.....	May 20, 1887.
68	Nire, Kagekazu.....	Empire of Japan.....	May 21, 1887.
9	Pollack, Edwin Taylor.....	Ohio.....	May 20, 1887.
30	Preston, Charles Francis.....	Maryland.....	Sept. 6, 1887.
38	Richard, George.....	Ohio.....	Sept. 12, 1887.
19	Senn, Thomas James.....	South Carolina.....	May 19, 1887.
29	Smith, Harry Eaton.....	Ohio.....	May 20, 1887.
93	Smith, Henry Gerrish.....	Ohio.....	Sept. 5, 1887.
36	Smith, Louis Frederick.....	Illinois.....	June 2, 1887.
8	Stearns, Clark Daniel.....	Michigan.....	Sept. 7, 1887.
23	Sydney, Jay Hale.....	Arizona.....	Sept. 7, 1887.
26	Threlk, John.....	New York.....	May 20, 1887.
95	Watt, Richard Morgan.....	Pennsylvania.....	Sept. 22, 1887.
7	Willard, Arthur Lee.....	Missouri.....	Sept. 7, 1887.
18	Williams, Dea.....	Ohio.....	July 16, 1887.
91	Zahn, Frank Boher.....	Pennsylvania.....	Sept. 8, 1887.

* Japanese student. Withdrawn at the end of the four years course.

Line Division—41 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.										Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physica.	International law.	Physiology and hygiene.	Discipline.		
17	3	a	41	a	a	24	a	a	a	a	a	95	1
18	0	30	22	35	23	19	25	37	21	36	28	48	31
16	3	4	1	5	6	11	0	5	5	21	2	5	*4
17	6	28	39	29	14	8	23	30	33	35	31	71	25
15	4	14	26	4	5	1	2	7	8	12	29	39	6
17	6	38	40	38	33	32	37	34	37	37	35	77	39
15	11	23	28	24	30	35	18	29	36	20	36	98	32
14	7	22	11	19	16	23	15	18	24	26	37	87	23
18	0	30	16	27	24	14	32	25	30	15	30	56	27
16	8	26	23	8	10	5	22	10	27	29	22	31	17
17	10	16	25	16	8	9	10	8	34	19	17	26	14
16	10	23	21	24	33	21	18	27	17	18	10	4	122
17	8	1	5	1	4	10	3	1	1	2	4	6	*2
16	2	39	36	32	39	35	32	39	26	32	34	59	37
17	0	10	4	16	20	16	20	17	22	30	6	1	12
16	8	7	12	15	14	19	34	22	23	8	8	4	13
18	0	19	6	13	18	13	8	21	17	23	25	56	16
16	3	29	26	37	36	30	35	27	23	21	33	67	134
16	4	12	34	12	8	4	7	14	6	11	22	22	10
16	7	20	20	20	29	40	24	32	7	13	32	49	24
17	1	37	17	26	27	23	29	26	35	34	17	13	28
14	8	13	14	10	17	26	14	15	11	14	20	22	15
17	11	34	32	38	25	28	39	30	15	31	22	32	35
18	0	36	36	34	37	37	30	33	29	38	21	44	33
16	8	16	7	29	21	26	31	20	19	27	7	5	21
16	10	8	38	9	11	18	6	6	14	15	26	37	111
17	8	40	24	40	40	41	40	40	40	40	38	122	120
16	7	15	10	14	7	6	12	13	16	25	14	22	9
16	4	34	31	29	30	34	28	34	32	28	15	16	30
15	7	32	30	32	33	39	26	34	30	17	40	164	38
15	5	25	32	23	11	17	11	19	24	39	19	17	19
17	5	33	28	36	37	25	36	38	39	32	27	49	36
17	5	3	19	2	2	2	1	3	10	7	3	0	*3
17	6	20	34	21	27	31	16	16	3	4	12	14	20
17	8	11	9	7	13	15	20	12	19	10	8	0	8
16	6	16	7	22	22	32	27	23	12	5	39	148	29
14	5	27	18	28	30	22	37	24	37	24	13	14	26
15	3	5	13	6	3	7	5	10	8	6	10	5	*5
17	7	5	2	11	19	11	16	4	2	1	4	10	7
17	5	9	15	18	25	37	13	9	13	9	15	72	18
16	3	2	3	2	1	3	4	2	4	3	1	3	*1

RELATIVE STANDING—

Relative Standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.
	4 Emrich, Charles Ralf	Illinois	May 19, 1897
	7 Law, George William	Iowa	May 21, 1897
	5 McGinnis, William Hugh	Tennessee	May 20, 1897
	2 Reed, Milton Eugene	Iowa	Sept. 5, 1897
	1 Robison, John Keeler	Michigan	May 20, 1897
	3 Rowen, John Howard	Pennsylvania	Sept. 27, 1897
6	Shepard, George Hugh	Wisconsin	Sept. 27, 1897

Engineer Division—7 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.										Order of annual merit.
Years.	Months.	Naval construction.	Designing machinery.	Marine engines.	Bollers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics and chemistry.	Physiology and hygiene.	Discipline.	Number of demerits.	
16	8	4	5	4	4	3	5	6	4	2	87	4
17	8	6	7	6	7	6	6	6	5	5	125	7
17	7	5	4	7	5	4	4	5	1	3	94	5
17	10	3	2	2	1	2	7	1	2	1	38	2
16	6	1	1	1	2	5	1	2	7	6	143	1
16	8	2	3	3	3	1	2	3	6	4	125	3
15	9	7	6	5	6	7	3	4	3	7	125	6

Relative standing of the Naval Cadets of the Second

Order of annual merit.	Name.	State from which appointed.	Date of admission
32	Ball, Walter.....	New York.....	Sept. 6, 1888
21	Beuret, John Douglass.....	Ohio.....	Sept. 7, 1888
14	Blakely, John Russell Young.....	Pennsylvania.....	Sept. 23, 1888
†	Borden, Thomas Sheppard.....	Louisiana.....	Sept. 25, 1888
2	Breckinridge, Joseph Cabell.....	Kentucky.....	Sept. 5, 1888
10	Campbell, Joseph Randolph.....	Wyoming.....	Sept. 29, 1888
23	Crank, Robert Kyle.....	Texas.....	Sept. 6, 1888
24	Davis, Austin Rockwell.....	Georgia.....	May 21, 1888
6	Davison, Gregory Caldwell.....	Missouri.....	May 22, 1888
15	Dawson, William Charles.....	Missouri.....	Sept. 6, 1888
7	Day, George Calvin.....	Vermont.....	May 19, 1888
2	Donnett, Stanley Pullen.....	Maine.....	May 19, 1888
13	Evans, Holden A.....	Florida.....	Sept. 5, 1888
26	Ferguson, Homer Lenoir.....	North Carolina.....	May 21, 1888
31	Gambie, Aaron Lichtenberger.....	Indiana.....	Sept. 5, 1888
27	Gibbs, Washington Dorsey.....	Mississippi.....	May 18, 1888
35	Hastbrouck, Raymond De Lancy.....	Idaho.....	Sept. 25, 1888
17	Hines, John Fore.....	Kentucky.....	May 21, 1888
27	Hoblitzelle, William Edward.....	Missouri.....	Sept. 6, 1888
22	Hullington, Howard Williams.....	Pennsylvania.....	May 19, 1888
9	Humery, Charles Lincoln.....	New Hampshire.....	May 21, 1888
12	Jewell, Charles Theodore.....	At large.....	May 19, 1888
25	Kellogg, Edward Stanley.....	New York.....	Sept. 5, 1888
36	Low, Theodore Henry.....	Connecticut.....	May 19, 1888
28	McChernick, Benjamin Bernard.....	New York.....	May 19, 1888
22	McDonald, Joseph Kaschiel.....	Illinois.....	Sept. 7, 1888
37	Macklin, Charles Fearn.....	New York.....	Sept. 23, 1888
8	McNamee, Luke.....	Kansas.....	Sept. 6, 1888
28	Mallison, George.....	North Carolina.....	May 21, 1888
34	Mather, George Herbert.....	New Jersey.....	May 22, 1888
22	Moss, Stanford Elwood.....	Georgia.....	Sept. 6, 1888
20	Myers, John Twigg.....	Georgia.....	Sept. 27, 1888
18	Payne, Fred Bonnaville.....	New York.....	May 21, 1888
20	Pollock, Emmett Eldridge.....	Illinois.....	May 19, 1888
24	Porter, John Singleton.....	Tennessee.....	Sept. 25, 1888
27	Pringle, Joel Roberts Polmer.....	Illinois.....	Sept. 6, 1888
27	Rice, Arthur.....	Indiana.....	Sept. 7, 1888
20	Rodney, Warren.....	Texas.....	Sept. 6, 1888
†	Russell, John Henry, Jr.....	At large.....	May 19, 1888
11	Sawyer, Frederick Lewis.....	Illinois.....	Sept. 6, 1888
19	Shreehan, James.....	New York.....	May 21, 1888
33	Stirling, Yates, Jr.....	Massachusetts.....	Sept. 6, 1888
29	Stitt, Thomas Lutz.....	Indiana.....	Sept. 5, 1888

Class—48 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.									Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.		
16	1	29	26	24	35	22	20	42	32	44	181	32
17	7	12	1	1	4	1	1	3	1	10	47	21
16	2	33	13	17	52	4	14	11	2	27	81	14
16	6	23	41	37	34	40	28	9	24	21	59	†
16	6	43	43	44	49	44	44	17	44	39	139	2
16	6	18	6	10	6	11	8	13	3	8	29	10
16	8	37	28	20	23	25	21	15	25	36	111	23
16	9	41	37	29	55	18	35	22	23	32	97	24
17	0	13	14	7	13	3	10	31	22	24	59	6
17	5	11	7	19	15	20	12	1	26	10	33	15
16	6	3	9	5	12	5	13	19	17	12	44	7
15	11	41	44	40	39	42	43	38	42	33	103	2
16	9	6	3	12	10	13	16	17	23	2	13	13
15	2	5	9	8	39	5	5	2	11	18	51	25
15	10	44	42	25	44	32	31	27	29	21	55	31
16	3	27	35	32	54	15	27	36	43	45	195	38
17	2	36	27	33	17	37	40	35	15	33	99	35
17	7	19	15	14	17	23	24	40	13	2	8	17
17	1	a	a	a	26	a	a	a	a	a	26	†
15	9	1	11	2	25	14	6	30	6	7	16	23
17	3	8	11	8	2	9	15	14	11	5	11	9
15	2	4	16	11	38	8	10	28	5	23	70	12
17	11	23	39	20	11	34	36	43	27	15	40	25
17	8	35	18	40	35	26	19	33	30	40	106	36
15	3	29	38	37	20	38	41	6	18	15	31	26
16	6	2	2	4	5	2	3	21	7	1	9	22
17	5	36	28	39	35	27	38	43	37	25	61	37
17	5	7	5	14	24	7	7	10	10	2	9	8
17	4	23	30	25	41	29	18	31	34	37	114	28
15	1	8	22	30	44	31	25	37	40	33	111	34
16	0	23	31	28	6	38	31	7	13	20	50	22
16	8	29	21	23	20	21	28	25	20	29	56	20
16	9	33	32	13	26	12	4	33	45	43	179	18
15	5	a	a	a	30	a	a	a	a	a	25	†
15	8	20	4	3	9	10	2	22	15	26	74	24
15	7	20	19	35	20	27	31	4	41	31	76	27
17	3	40	35	20	31	43	41	20	4	8	21	†
17	1	a	a	a	46	a	a	a	a	a	42	†
15	6	14	40	43	42	33	28	41	35	12	27	†
17	4	10	7	6	15	16	8	25	19	6	14	11
15	8	17	24	25	31	24	22	16	9	27	91	19
16	4	27	23	30	49	17	31	38	38	41	161	33
15	1	38	33	36	31	34	36	25	21	19	37	

Relative Standing of the Naval Cadets of the Second

Order of annual merit.	Name.	State from which appointed.	Date of admission.
	1- Stopford, Frederick William	Massachusetts	May 12, 1888
	20 Symington, Powers	West Virginia	Sept. 7, 1888
	16 Thompson, Leon Seymour	Ohio	May 21, 1888
	21 Trant, Frederick Augustus	Connecticut	May 19, 1888
P-	Zillman, Christian Charles Herman	Missouri	Sept. 27, 1888

Class—48 members—Annual Examination, June, 1891—Continued.

Age at date of admission.		Order of merit.									Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.		
15	7	14	33	40	47	40	38	24	39	42	177	↓
15	11	22	25	34	51	34	23	8	33	29	79	80
14	0	16	17	18	13	19	17	12	31	15	35	16
16	11	32	20	14	26	30	25	5	7	37	102	21
17	8	a	a	a	1	a	a	a	36	12	34	P

Relative Standing of the Naval Cadets of the Third

Order of annual merit.	Name.	State from which appointed.	Date of admission
1	Asbury, Louis George, Jr	Louisiana	Sept. 7, 1899
2	Bagley, Worth	North Carolina	Sept. 2, 1899
3	Baird, Lewis Conway	Indiana	Sept. 6, 1899
27	Berry, David Mark	California	Sept. 6, 1899
97	Bisset, Eugene Lee	Kentucky	Oct. 2, 1899
25	Brady, John Richard	Pennsylvania	Sept. 6, 1899
16	Campbell, Edward Hale	Indiana	Sept. 6, 1899
42	Carver, Marvin	Minnesota	Sept. 27, 1899
33	Chadwick, Frank Laird	Minnesota	May 18, 1899
98	Clark, Frank Hodges, Jr	Rhode Island	Sept. 8, 1899
†	Coleman, James Samuel	Alabama	Sept. 2, 1899
18	Cook, Allen Merriam	Kansas	May 22, 1899
44	Crocker, John Archdell	Pennsylvania	May 22, 1899
11	Crosley, Walter Selwyn	Connecticut	Sept. 2, 1899
15	Doddridge, John Nelson	West Virginia	Sept. 7, 1899
28	Douglas, Richard Spencer	Georgia	June 2, 1899
93	Elder, Edwin Avery	Massachusetts	May 21, 1899
40	Fewel, Christopher Catron	Texas	Oct. 2, 1899
96	Fitch, Claude James	Illinois	Sept. 7, 1899
21	Ginn, William Kern	Illinois	June 14, 1899
37	Grossbeck, William Gerard	Ohio	Sept. 5, 1899
12	Groff, Joseph Coblentz	Maryland	Oct. 2, 1899
31	Haina, Peter Onover, Jr	District of Columbia	May 19, 1899
43	Holsinger, Gerald Long	Kansas	Oct. 2, 1899
23	Johnson, Orion Porter	Pennsylvania	May 19, 1899
79	Jones, Lewis Benson	New York	May 21, 1899
17	Kellogg, Thomas Steele	At large	Oct. 19, 1899
10	Lang, Charles Jonas	Pennsylvania	Sept. 6, 1899
41	McKethan, Alfred Augustus	North Carolina	Sept. 6, 1899
94	Magill, Louis John	Pennsylvania	Nov. 11, 1899
91	Montgomery, William Black	Kentucky	Sept. 6, 1899
30	Morris, John Ramsey	Missouri	Sept. 7, 1899
95	Netting, Daniel Chapin, Jr	Kansas	May 21, 1899
26	Olmsted, Perry Napier	Oregon	May 21, 1899
13	Parker, Thomas Drayton	South Carolina	Oct. 2, 1899
32	Pearson, Henry Allen	Utah	Sept. 6, 1899
20	Perry, Joseph Albert	Illinois	Sept. 6, 1899
99	Pouget, Maurice Barthold	Missouri	Sept. 7, 1899
45	Potter, James Boyd	New Jersey	Sept. 6, 1899
29	Powell, William Glasgow	New Jersey	May 19, 1899
92	Powelson, Wilfrid Van Nest	New York	Sept. 6, 1899
46	Pratt, Alfred Allen	Illinois	Sept. 7, 1899
19	Price, Henry Bertrand	Iowa	May 2, 1899
47	Prater, Andre Morton	Kentucky	Sept. 6, 1899

Class—56 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.						Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		
19	10	a	a	a	a	a	a	35	Pr
15	5	52	50	50	20	52	50	162	2r
18	2	54	54	59	54	38	53	230	2r
17	7	35	17	39	37	11	14	16	27
18	1	8	4	6	3	25	45	108	*7
16	11	23	25	36	23	25	38	82	25
16	11	3	25	42	37	28	45	142	16
18	5	41	41	31	53	29	43	97	42
17	2	24	27	34	17	50	32	90	33
17	9	6	16	15	12	7	1	33	*6
16	3	42	51	52	28	43	24	41	†
18	8	11	31	19	47	10	19	56	18
17	3	39	43	51	47	34	44	119	44
17	10	13	13	13	15	32	9	19	11
17	1	7	9	9	34	41	28	52	15
17	10	36	44	36	24	42	35	93	38
16	9	4	6	5	5	3	27	57	*3
15	11	22	23	45	37	53	50	117	40
17	0	14	2	18	6	1	15	17	*5
18	0	27	23	8	8	17	31	68	21
15	0	49	53	54	25	37	55	276	2r
19	4	9	22	11	11	34	26	71	12
17	4	29	29	46	35	14	16	44	31
19	3	36	36	31	29	51	40	77	43
15	9	19	33	31	18	21	15	52	23
16	6	a	a	55	a	a	36	64	¶a
18	2	15	32	16	15	21	21	39	17
19	10	12	15	17	12	1	40	95	10
17	10	39	41	42	51	39	21.	30	41
18	9	5	9	14	3	9	4	24	*4
16	1	1	1	3	42	12	4	26	*1
19	8	18	12	35	31	49	29	33	30
19	9	25	3	2	7	18	6	18	*8
17	10	44	48	49	44	24	1	23	36
18	2	17	14	9	2	39	29	65	13
19	8	33	27	19	41	34	6	17	32
15	10	10	20	36	37	29	15	29	20
18	7	32	20	7	1	6	9	29	*9
16	8	48	44	42	33	54	47	121	48
17	8	42	47	58	22	4	38	107	35
17	0	2	5	1	9	15	3	27	*2
16	2	46	38	28	49	45	52	144	45
19	11	34	19	4	14	7	6	18	1!
16	2	38	34	55	52	21	54	262	

Relative Standing of the Naval Cadets of the Third

Order of annual merit.	Name.	State from which appointed.	Date of admission.
37	Read, Frank De Witt	Ohio	Sept. 6, 1899
26	Ryan, John Paul Joseph	New York.....	May 22, 1899
46	Scott, Guy Terrell	Nebraska.....	Sept. 7, 1899
37	Stearns, Edward Cheever.....	Ohio	May 21, 1899
29	Sticht, John Low	New York.....	Sept. 7, 1899
34	Sturdevant, Richard	Pennsylvania.....	May 6, 1899
24	Trench, Martin Edward.....	Minnesota.....	Oct. 3, 1899
23	Upham, Frank Brooks	Montana	Sept. 6, 1899
14	Ward, Henry Heber	New Jersey.....	Sept. 7, 1899
29	Wells, Chester	Pennsylvania.....	Nov. 15, 1899
17	Whitman, Walter Bloomfield	Texas	May 20, 1899
22	Wilson, Thomas Sheldon	Illinois.....	May 20, 1899

Class—56 members—Annual Examination, June, 1891—Continued.

Age at date of admission.		Order of merit.						Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		
19	2	47	36	41	21	29	40	77	37
19	9	29	30	30	26	5	33	74	26
16	8	44	46	40	49	46	48	121	46
17	8	53	52	48	42	15	13	42	2
16	5	31	39	25	46	44	36	64	39
17	7	50	34	25	36	19	19	29	34
19	10	26	11	27	45	20	24	38	24
17	0	19	40	22	18	46	9	22	23
18	3	15	7	22	10	13	46	197	14
19	1	27	8	19	27	38	33	114	29
18	6	51	49	22	29	46	9	25	17
18	1	21	18	12	32	25	21	46	22

Relative standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
30	Adams, Lawrence Stowell	Pennsylvania	Sept 25, 1899
Pr 47	Andrews, Claude Norton	Iowa	Sept 2, 1899
414	Babin, Provoost	New York	Sept 6, 1899
42	Baker, Henry Thomas	Ohio	Oct 7, 1899
47	Baldwin, Murray	Texas	Sept 27, 1899
47	Batta, Edward Lee	Texas	May 22, 1899
16	Bennett, Ernest Linwood	Massachusetts	Sept 24, 1899
39	Berryman, John Russell	Ohio	May 22, 1899
40	Buckwalter, Charles Sumner	Illinois	Sept 2, 1899
39	Bulmer, Rufus Carlyle	Nevada	Sept 25, 1899
50	Chappell, Ralph Hubert	Michigan	May 22, 1899
43	Chester, Arthur Tremaine	At large	May 14, 1899
17	Churchill, Winston	Missouri	May 21, 1899
32	Cone, Hutch Ingham	Florida	Sept 5, 1899
21	Cooper, Ignatius Taylor	Delaware	May 20, 1899
43	Cox, Daniel Margate	New York	Sept 2, 1899
47	Craven, Thomas Tingey	Tennessee	Sept 27, 1899
51	Crosby, Benjamin Gratz	At large	Sept 25, 1899
40	DeJarnette, James Daniel Coleman	Virginia	Sept 2, 1899
47	DeKay, Eckford Craven	New York	Sept 2, 1899
54	DeLaury, Edwin Hayden	Tennessee	May 21, 1899
40	Emery, Arthur Ballard	New Hampshire	May 22, 1899
45	England, Clarence	Arkansas	Sept 5, 1899
30	Fullinwider, Simon Peter	Missouri	May 21, 1899
52	Gallraith, Gilbert Smith	Pennsylvania	Sept 2, 1899
57	Gelm, George Karl	New York	May 22, 1899
48	Gillis, Irvin Van Gorder	New York	Sept 6, 1899
19	Graham, Steven Victor	Michigan	May 14, 1899
47	Greer, George Tate	Virginia	May 20, 1899
54	Griffith, Claude Willis	Maryland	Sept 2, 1899
24	Hinds, Alfred Walton	Alabama	Sept 2, 1899
23	Hudgins, John Melton	Virginia	Sept 2, 1899
410	Hull, Alexander Thomas	Virginia	May 21, 1899
47	Isard, Walter Blake	South Carolina	Sept 10, 1899
2	Jones, Leland Freeman	South Carolina	Sept 2, 1899
24	Johnson, Moulton Kinsinger	Ohio	June 10, 1899
15	Jones, Lewis Burton	New York	May 21, 1899
22	Kavanagh, Arthur Glynn	Nebraska	May 20, 1899
47	Lafayette Paul Meyer	North Dakota	Sept 25, 1899
45	Lane, Charles Arthur	Missouri	May 20, 1899
20	Levy, John McClane	Texas	Sept 2, 1899
47	Levy, Frank	Kentucky	May 20, 1899
47	McGowan, Michael James	Michigan	May 22, 1899
45	McLennan, Ridley	Tennessee	May 20, 1899
17	McMinn, William Kavanaugh	Alabama	Sept 1, 1899

Class—72 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.					Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Number of demerits.	
15	7	36	50	17	40	49	30
16	6	58	64	24	61	71	Pr 47
18	0	11	3	34	14	21	*14
16	4	44	35	46	48	54	42
17	11	66	27	65	69	250	2r
17	11	63	51	56	21	16	1r
17	10	24	13	14	23	33	16
17	11	59	66	49	67	184	59
16	10	49	26	41	48	47	40
16	11	41	32	43	30	32	39
18	11	29	52	59	33	25	50
16	9	17	52	62	14	25	43
18	6	26	16	8	48	76	17
19	4	25	36	43	28	31	32
17	11	12	25	33	23	17	21
17	6	7	5	4	4	14	*3
17	2	63	58	67	48	66	2r
18	8	54	67	27	43	39	51
17	9	a	a	a	a	87	7r
17	3	68	65	55	65	150	2r
19	2	50	44	62	65	168	56
17	7	a	a	a	a	20	7r
18	2	33	20	43	59	79	35
18	9	10	21	36	10	10	20
18	5	50	55	46	30	25	52
19	7	56	60	64	42	60	57
16	8	3	29	19	10	30	*8
16	2	22	23	9	56	71	19
18	5	52	69	69	62	87	2r
17	11	45	60	51	58	44	54
16	1	15	29	25	48	60	24
18	10	6	52	34	43	50	23
16	5	16	7	6	33	39	*10
17	4	69	32	60	37	27	2r
17	0	35	28	13	59	94	25
19	6	57	29	30	33	35	38
17	5	17	11	10	27	43	15
19	4	8	23	28	64	145	22
18	0	62	43	57	56	42	†
19	3	42	40	57	33	32	45
16	4	31	46	18	45	32	29
16	1	39	49	39	63	131	49
16	7	65	62	68	42	42	2
17	6	5	7	20	14	17	
18	6	20	13	38	37	36	

Relative standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
31	McNeely, Robert Whitehead	North Carolina	Sept. 2, 1898
39	Manion, Walter James	Louisiana	Sept. 2, 1898
40	Mann, George Hiram	Pennsylvania	Sept. 2, 1898
37	Moody, Roscoe Charles	Maine	Sept. 2, 1898
23	Osborn, Robert Hatfield	New York	May 22, 1898
24	Perkins, Frederick King	California	June 11, 1898
53	Reeves, Joseph Mason	Illinois	Sept. 2, 1898
28	Ridgely, Randolph, Jr.	Georgia	May 21, 1898
42	Robert, William Pierre	Mississippi	May 20, 1898
41	Roberts, Thomas Gaines	Alabama	May 21, 1898
18	Ryan, George Whitehouse	Massachusetts	June 12, 1898
411	Sandoz, Fritz Louis	Louisiana	May 12, 1898
41	Scott, William Pitt	Pennsylvania	May 20, 1898
412	Sellers, David Feste	New Mexico	May 21, 1898
47	Shaw, Melville Jones	Minnesota	Sept. 2, 1898
†	Saw, Carlton Farwell	Maine	May 12, 1898
26	Spear, Roscoe	Pennsylvania	May 22, 1898
48	Stone, George Loring Porter	Georgia	Sept. 22, 1898
44	Stone, Daymond	Alabama	Sept. 2, 1898
44	Tompkins, John Thomas	Louisiana	Sept. 2, 1898
25	Turpin, Walter Stevens	Maryland	May 21, 1898
20	Walker, Henry Mallory	South Dakota	Sept. 2, 1898
47	Watson, Edward Howe	Kentucky	Sept. 22, 1898
413	Webster, Charles	Massachusetts	Sept. 2, 1898
44	Whitted, William Scott	North Carolina	May 20, 1898
46	Winn, Philip Bird	Kentucky	Sept. 12, 1898
22	Winship, Emory	Georgia	June 2, 1898

Class—72 members—Annual Examination, June, 1891—Continued.

Age at date of admission.		Order of merit.					Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Number of demerits.	
17	1	39	18	40	21	25	31
17	9	9	17	7	10	36	*9
18	4	a	a	a	a	22	†
17	6	47	46	22	48	62	37
16	6	47	38	31	9	16	33
17	6	17	36	31	68	211	34
17	10	53	56	53	18	23	53
18	8	28	32	21	14	23	28
16	10	4	2	16	1	9	*2
19	9	2	1	11	23	47	*1
18	10	27	21	12	4	7	18
18	3	34	13	1	3	11	*11
16	11	43	42	41	18	17	41
16	4	23	12	4	4	7	*13
18	1	20	4	2	10	20	*7
16	2	61	44	49	30	28	†
18	4	38	19	22	40	50	26
16	2	46	67	37	45	52	48
17	1	14	6	3	2	17	*6
19	11	1	9	26	18	39	*4
16	8	54	58	53	42	43	55
19	6	60	67	66	28	5	58
16	7	67	39	48	37	33	†
16	8	13	10	14	7	8	*12
19	10	31	41	60	23	25	44
19	4	29	62	51	7	8	46
18	3	37	48	28	45	56	36

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

December 13, 1890, to November 18, 1891.

APPOINTED ENSIGNS JULY 1, 1891.

Naval Cadet Hoff, Arthur Bainbridge	Class of 1899
Naval Cadet Twining, Nathan Crook	Class of 1899
Naval Cadet Hutchison, Benjamin Franklin	Class of 1899
Naval Cadet Kittelle, Sumner Ely	Class of 1899
Naval Cadet Pratt, William Veazie	Class of 1899
Naval Cadet Marvell, George Ralph	Class of 1899
Naval Cadet Magruder, Thomas Pickett	Class of 1899
Naval Cadet MacDougall, William Dugald	Class of 1899
Naval Cadet Bradshaw, George Brown	Class of 1899
Naval Cadet de Steiguer, Louis Rudolph	Class of 1899
Naval Cadet Phelps, William Woodward	Class of 1899
Naval Cadet Kaiser, Louis Anthony	Class of 1899
Naval Cadet Cole, William Carey	Class of 1899
Naval Cadet Brand, Charles Augustine	Class of 1899
Naval Cadet Williams, Philip	Class of 1899
Naval Cadet Terhune, Warren Jay	Class of 1899
Naval Cadet Mitchell, George Grant	Class of 1899
Naval Cadet Harrison, William Kelley	Class of 1899
Naval Cadet Fermier, George Lucien	Class of 1899

APPOINTED ASSISTANT ENGINEERS JULY 1, 1891.

Naval Cadet Nulton, Louis McCoy	Class of 1899
Naval Cadet Patton, John Bryson	Class of 1899
Naval Cadet Danforth, George Washington	Class of 1899
Naval Cadet Carney, Robert Ernest	Class of 1899

APPOINTED ASSISTANT NAVAL CONSTRUCTORS JULY 1, 1891.

Naval Cadet Hobson, Richmond Pearson	Class of 1899
Naval Cadet Rock, George Henry	Class of 1899

APPOINTED SECOND LIEUTENANTS U. S. MARINE CORPS JULY 1, 1891.

Naval Cadet Lucas, Lewis Clark	Class of 1899
Naval Cadet Neumann, Bertram Stansbury	Class of 1899
Naval Cadet Long, Charles Grant	Class of 1899
Naval Cadet Fuller, Ben Hobard	Class of 1899
Naval Cadet Offley, Cleland Nelson	Class of 1899
Naval Cadet Dutton, Robert McMillan	Class of 1899
Naval Cadet Prochaska, Julius	Class of 1899
Naval Cadet Lowndes, Edward Rutledge	Class of 1899

HONORABLY DISCHARGED JUNE 30, 1891, UPON THEIR OWN APPLICATION, WITH CERTIFICATE OF GRADUATION, AT THE END OF THE FOUR YEARS' COURSE.

Naval Cadet Flowers, Robert Lee	Class of 1891
Naval Cadet Kochersperger, Frank Henry	Class of 1891
Naval Cadet Ninds, Daniel Benjamin	Class of 1891

WITHDRAWN JUNE, 1891, AT THE END OF THE FOUR YEARS' COURSE.

Naval Cadet Nire, Kagekazu..... Japanese student.

RESIGNED.

Naval Cadet Talcott, Arthur Jewell, fourth class	Jan. 14, 1891
Naval Cadet Allen, Charles, second class.....	Feb. 16, 1891
Naval Cadet Arison, Edgar Emmett, second class.....	Feb. 19, 1891
Naval Cadet Logan, William Vance, third class	Feb. 19, 1891
Naval Cadet Blandy, Edwin Chauncey, fourth class.....	Feb. 19, 1891
Naval Cadet Kress, Frederick Charles, fourth class	Feb. 19, 1891
Naval Cadet McAvoy, Ballard Brownlee, fourth class.....	Feb. 19, 1891
Naval Cadet Tolfree, Herbert Myron, fourth class	Feb. 19, 1891
Naval Cadet Bannon, Philip Michael, second class.....	Feb. 20, 1891
Naval Cadet Hooker, James Clifton, third class	Feb. 20, 1891
Naval Cadet Bivins, Robert Francis, fourth class.....	Feb. 20, 1891
Naval Cadet Houk, Herman Whitelaw, fourth class	Feb. 20, 1891
Naval Cadet Towne, Arthur Elisha, fourth class.....	Feb. 24, 1891
Naval Cadet Wishart, William Clifton, third class.....	Feb. 26, 1891
Naval Cadet Valentine, William Stanley, third class.....	May 15, 1891
Naval Cadet Baird, Lewis Conway, third class	June 8, 1891
Naval Cadet Dennett, Stanley Pullen, second class.....	June 17, 1891
Naval Cadet Groesbeck, William Gerard, third class.....	June 17, 1891
Naval Cadet Bagley, Worth, third class.....	June 17, 1891
Naval Cadet Baldwin, Murray, fourth class	June 17, 1891
Naval Cadet Craven, Thomas Tingey, fourth class.....	June 17, 1891
Naval Cadet De Kay, Eckford Craven, fourth class.....	June 17, 1891
Naval Cadet Greer, George Tate, fourth class	June 17, 1891
Naval Cadet Izard, Walter Blake, fourth class.....	June 17, 1891
Naval Cadet McCormack, Michael James, fourth class.....	June 17, 1891
Naval Cadet Watson, Edward Howe, fourth class	June 17, 1891
Naval Cadet Stearns, Edward Cheever, third class.....	June 18, 1891
Naval Cadet Andrews, Claude Norton, fourth class	June 25, 1891
Naval Cadet Breckinridge, Joseph Cabell, second class.....	June 27, 1891
Naval Cadet Gibbs, Washington Dorsey, first class	Sept. 3, 1891
Naval Cadet Hoblitzelle, William Edward, second class	Oct. 3, 1891
Naval Cadet Asbury, Louis George, third class	Oct. 7, 1891
Naval Cadet Zillman, Christian Charles Herman, second class	Oct. 9, 1891
Naval Cadet Rice, Arthur, second class.....	Oct. 13, 1891
Naval Cadet Stopford, Frederick William, second class.....	Oct. 13, 1891
Naval Cadet Batts, Edward Lee, fourth class.....	Oct. 13, 1891

DISMISSED.

Naval Cadet Feild, Hubbard Moylan, third class.....	Dec. 18, 1890
Naval Cadet Dailey, Harry Logan, fourth class.....	Dec. 18, 1890

MERIT-ROLLS FOR 1890-'91.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 75, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls." (Regulations U. S. Naval Academy, § 191.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum read "passed with distinction"; those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit"; and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for engineer division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick.

MERIT-ROLL—GRADUATING CLASS.

NAME.	Naval tactics.		Ordnance and gunnery.		Navigation.		Steam-engineering.		Modern languages.		Cruise reports, navigation, and other bills.		Aggregate for final examination.		Aggregate for four years.		Final aggregate.		Assignment.
	56	44	44	44	44	44	23	24	240	760	1000								
1 Arthur B. Huff	66.90	37.73	37.96	34.94	27.94	21.78	211.34	660.75	871.99	Ensign.									
2 Nathan C. Twining	64.24	40.04	37.68	29.82	28.14	21.18	209.04	642.46	851.50	Ensign.									
3 Benjamin F. Hutchison	42.14	32.01	32.67	23.71	23.37	20.58	181.38	630.92	812.30	Ensign.									
4 Gunner E. Kittelle	46.34	33.55	36.52	37.51	34.42	22.68	201.02	613.29	804.31	Ensign.									
5 William V. Pratt	43.82	32.78	33.44	32.56	23.28	20.48	184.78	612.12	798.88	Ensign.									
6 Louis McC. Nulton	42.70	33.22	32.56	41.36	22.54	20.48	183.26	588.35	781.61	Assistant engineer.									
7 Lewis C. Lucas	39.34	39.60	30.91	32.56	21.67	20.22	183.70	587.00	770.70	Second Lieutenant, Marine Corps.									
8 George B. Marvel	39.62	31.66	32.78	31.02	18.46	22.50	178.08	563.73	769.51	Ensign.									
9 John B. Patton	39.20	26.42	29.81	33.55	21.49	19.62	179.09	566.69	745.78	Assistant engineer.									
10 Thomas P. Magruder	43.40	37.18	34.39	27.50	21.91	21.60	189.98	555.51	745.49	Ensign.									
11 William D. MacDougall	41.44	31.68	27.72	33.88	21.70	21.60	178.08	564.68	742.70	Ensign.									
12 George B. Bradshaw	42.42	34.98	30.80	34.21	24.99	20.22	187.62	549.18	738.80	Ensign.									
13 George W. Danforth	40.38	31.13	28.71	37.95	19.67	19.38	177.16	539.53	736.69	Assistant engineer.									
14 Bertram B. Neumann	42.00	28.82	27.60	30.58	20.65	19.32	168.87	565.75	734.62	Second Lieutenant, Marine Corps.									
15 Charles G. Long	40.32	28.60	30.58	27.72	21.28	19.60	168.20	564.93	732.23	Second Lieutenant, Marine Corps.									
16 Louis B. de Steiguer	42.56	34.20	32.01	31.35	18.97	21.60	182.79	549.20	731.99	Ensign.									
17 William W. Phelps	45.26	34.21	32.77	23.22	19.86	20.82	187.26	542.22	730.49	Ensign.									
18 Ben H. Fuller	43.26	34.21	36.20	31.24	21.63	19.92	184.56	540.25	728.81	Second Lieutenant, Marine Corps.									
19 Louis A. Kahner	40.74	33.22	34.21	30.69	22.46	18.78	180.10	542.15	722.25	Ensign.									
20 William C. Cole	39.90	32.99	29.92	34.87	21.14	21.30	180.08	541.89	721.61	Ensign.									
21 Cloland H. Oddy	38.60	34.76	29.15	25.68	19.26	21.12	178.64	541.87	720.51	Assistant engineer.									
22 Charles A. Broad	37.80	33.00	30.26	24.67	20.98	20.28	177.94	539.78	717.00	Ensign.									

23	Phillip Williams	45.64	31.02	27.72	36.08	19.95	19.92	180.33	535.38	715.71	Ensign.
24	Robert E. Carney	43.40	31.35	29.37	38.06	22.26	20.10	184.54	529.77	714.31	Assistant engineer.
25	Warren J. Terhune	39.34	32.67	32.12	31.68	22.12	21.30	179.23	527.19	706.42	Ensign.
26	George G. Mitchell	36.54	28.93	29.15	29.37	21.63	20.10	165.72	540.57	706.29	Ensign.
27	William K. Harrison	42.00	34.10	28.60	32.78	21.49	20.52	179.49	510.49	699.98	Ensign.
28	Robert McM. Dutton	41.16	29.04	27.61	30.25	20.51	18.72	167.29	513.55	690.84	Second Lieutenant, Marine Corps.
29	Julius Prochazka	39.48	27.72	27.61	28.27	20.93	20.52	164.53	503.51	668.04	Second Lieutenant, Marine Corps.
30	George L. Fermier	37.66	28.93	27.50	34.87	19.18	21.42	169.56	492.19	661.75	Ensign.
b	Edward B. Lowndes	43.26	32.12	29.92	33.99	18.48	13.62	170.97	554.67	726.06	Second Lieutenant, Marine Corps.

NOTE.—Naval Cadets Richmond B. Hobson and George H. Bock, appointed Assistant Naval Constructors, did not appear at the final graduating examination.

b Deficient in cruise reports.

Merit-roll for the four years ending June, 1890, of the Naval Cadets of the Class appointed in 1886, now performing required service afloat—Line Division.

Order of merit.	NAME.	Aggregate for fourth year.	Aggregate for third year.	Aggregate for second year.	Aggregate for first year.	General aggregate for four years.
	Maxima	304	228	152	76	760
01	Thomas F. Ruhn	264.08	196.36	137.90	71.25	669.59
02	Lawrence Hpear	270.80	192.80	132.23	69.23	664.06
3	Noah T. Coleman	249.39	186.59	131.22	64.25	631.45
4	Frank H. Schofield	264.01	184.65	125.63	64.51	638.80
5	John V. Chase	236.19	180.78	126.23	64.17	607.37
6	Alonso Gartley	248.74	177.36	117.80	58.70	602.60
7	Henry J. Ziegemeier	237.07	171.24	120.97	63.08	602.36
8	Cleland Davis	224.66	173.54	126.11	64.87	589.18
9	Matt H. Signer	223.06	169.62	121.96	61.81	576.45
10	John M. Blankenship	231.39	163.57	118.09	61.73	574.78
11	William H. Buck	222.48	160.54	121.09	64.29	568.40
12	Montgomery M. Taylor	219.93	166.17	112.10	62.26	560.46
13	Henry B. Ritter	224.80	158.01	109.60	57.11	549.52
14	George W. Williams	210.68	161.95	120.18	65.17	558.98
15	Albertus W. Catlin	229.47	158.22	109.23	58.53	555.45
16	Charles B. McVay, jr.	219.68	159.95	117.28	58.28	555.29
17	Charles T. Vogelzang	210.95	158.43	117.42	62.39	549.19
18	Lay H. Everhart	222.76	155.73	112.22	57.24	548.15
19	William A. Snow	215.44	167.26	114.60	59.19	546.49
20	Franklin B. Sullivan	215.46	165.63	105.47	55.65	542.21
21	Claude Bailey	208.52	158.99	112.84	61.67	542.02
22	Wendell C. Neville	220.76	154.69	103.67	58.01	537.13
23	Lawrence H. Moss	200.81	162.28	110.69	64.27	538.05
24	John H. Dayton	216.14	152.96	107.26	58.21	534.57
25	Lucius A. Bostwick	212.63	154.83	107.68	55.90	531.04
26	Charles O. Bond	207.36	161.06	107.08	53.73	529.23
27	Cyrus S. Radford	207.75	152.80	107.16	54.75	522.46
28	Thomas C. Treadwell	198.72	157.27	107.91	61.89	525.79
29	William A. Moffett	201.24	152.26	111.83	60.05	525.38
30	Julius L. Latimer	211.11	155.25	97.95	52.08	516.39
31	John E. Edie	193.06	149.28	105.41	58.49	506.24

Merit-roll for the four years ending June, 1890, of the Naval Cadets of the Class appointed in 1886, now performing required service afloat—Engineer Division.

1	Urban T. Holmes	248.30	181.08	114.52	54.83	608.73
2	Claude B. Price	224.68	168.04	109.15	54.92	556.79
3	Doctor E. Dismukes	204.19	151.62	101.79	54.60	512.20

Merit-roll, for the four years ending June, 1891, of the Naval Cadets of the Class appointed in 1887, now performing required service afloat—Line Division.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	760
*1	Frank B. Zahn.....	70.11	144.82	204.95	280.69	700.57
*2	Heratie G. Gillmer.....	69.37	142.55	202.97	279.80	694.69
*3	Henry G. Smith.....	66.49	135.24	201.49	277.70	680.92
*4	Richard M. Watt.....	68.53	135.36	194.21	266.31	664.41
*5	Reginald E. Belknap.....	69.19	133.53	189.58	266.89	659.19
*6	DeWitt Blamer.....	61.72	130.05	197.28	257.44	646.49
7	Clark D. Stearns.....	64.49	129.78	186.00	251.38	631.65
18	Daniel B. Ninde.....	64.43	133.04	181.15	249.92	628.54
9	Edwin T. Pollock.....	62.72	129.62	185.14	250.33	627.81
10	Henry C. Kuenzli.....	64.22	127.98	184.61	250.03	626.84
11	Arthur L. Willard.....	63.11	123.44	177.37	257.38	621.30
12	Harley H. Christy.....	61.78	126.28	186.24	242.58	616.88
13	Benwick J. Hartung.....	57.77	119.84	175.87	247.90	601.38
14	Henry H. Hough.....	64.30	124.62	164.27	247.74	600.93
15	Noble E. Irwin.....	53.11	118.75	185.26	242.59	599.71
16	Lucien G. Smith.....	64.41	125.45	172.48	236.46	598.80
17	Waldo Evans.....	53.84	118.24	176.95	246.20	595.23
18	John G. F. Moale.....	62.63	122.22	162.87	235.21	582.93
19	Robert L. Flowers.....	53.64	114.22	168.65	234.63	571.14
20	Albert S. McLemore.....	67.69	124.18	155.15	218.21	565.23
21	Thomas J. Senn.....	55.41	107.84	161.42	237.71	562.38
22	Bion B. Bierer.....	51.67	115.04	169.41	226.19	562.31
23	Harry H. Caldwell.....	56.22	110.21	164.05	231.09	561.57
24	Charles F. Preston.....	63.66	121.47	153.13	222.72	560.98
25	Dion Williams.....	55.99	109.91	151.73	242.57	560.20
26	Rufus H. Lane.....	58.51	110.01	163.04	227.85	554.41
27	Jay H. Sypher.....	54.59	112.47	159.26	224.19	550.51
28	Richard H. Leigh.....	53.27	113.49	158.23	224.38	549.37
29	Horace G. Macfarland.....	53.21	101.69	149.35	245.04	549.29
30	William D. Brotherton.....	55.85	111.74	160.00	221.98	549.07
31	Adelbert Althouse.....	53.97	110.26	160.72	222.10	547.05
32	James F. Carter.....	57.01	110.47	152.82	224.54	544.84
33	Frank H. Kochersperger.....	53.95	107.01	159.69	217.19	537.84
34	William N. McKelvy.....	54.51	108.32	152.05	216.90	531.78
35	Harry E. Smith.....	52.00	108.16	154.68	215.72	530.56
36	Elisha Theall.....	49.39	102.37	147.19	225.49	524.44
37	Irving Blount.....	56.09	111.66	150.08	205.01	522.79
38	George Richards.....	48.56	106.21	153.25	208.12	516.14
39	Louis H. Gross.....	49.79	101.34	143.81	211.63	511.57

Merit-roll for the four years ending June, 1891, of the Naval Cadets of the Class appointed in 1887, now performing required service afloat—Engineer Division.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
1	John K. Robison	71.15	130.40	190.11	267.47	659.13
2	John H. Bowen	60.31	130.67	184.41	238.71	614.10
3	Milton K. Reed	58.72	124.10	168.58	245.44	596.84
4	Charles R. Emrich	58.63	117.65	165.61	228.80	570.69
5	William H. McGrann	59.45	116.59	161.53	224.07	561.64
6	George H. Shepard	62.29	110.02	161.24	216.77	550.32
7	George W. Laws	55.76	103.78	151.25	212.54	523.33

Order of annual merit.	NAME.	Seamanship, naval construction, and naval tactics.	Seamanship, practice and cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice and cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Discipline.	Aggregate.
		60	8	60	48	8	20	16	12	8	64	304
*1	Maxima.											
*1	Frank B. Zahn.	54.30	6.50	55.65	45.24	7.40	17.85	13.68	10.95	7.04	62.08	280.69
*2	Horatio G. Gillmor.	55.20	6.20	56.70	43.20	7.00	18.55	14.32	11.25	7.06	60.32	279.80
*3	Henry G. Smith.	54.00	5.12	55.65	44.76	7.44	19.50	13.52	10.59	6.64	60.48	277.70
*4	Reginald R. Belknap.	51.90	6.78	53.25	41.76	6.94	15.50	12.92	10.86	6.02	60.96	266.89
*5	Richard M. Watt.	50.85	5.48	52.65	43.32	7.26	17.70	12.24	10.65	6.80	59.36	266.31
6	De Witt Blamer.	46.20	4.56	54.45	42.48	7.58	18.70	12.48	10.65	6.42	53.92	257.44
7	Arthur L. Willard.	50.85	6.58	50.40	36.12	6.94	14.25	13.36	11.16	7.40	60.32	257.38
8	Clark D. Stearns.	47.55	5.72	51.15	37.80	6.86	13.90	12.12	10.20	6.40	59.68	251.38
9	Edwin T. Pollock.	46.05	5.66	49.80	41.16	7.32	14.75	11.92	10.35	5.88	57.44	250.33
10	Henry C. Kuenzli.	47.40	4.24	50.25	39.72	7.38	16.40	11.88	10.80	6.44	55.52	250.03
11	Daniel B. Ninde.	49.20	3.90	50.85	38.28	6.58	16.60	12.76	10.41	6.30	55.04	249.92
12	Renwick J. Hartung.	48.60	6.46	49.20	35.88	6.82	13.90	11.28	10.06	5.68	60.00	247.90
13	Henry H. Hough.	49.35	5.60	49.50	37.44	6.56	12.00	10.96	10.05	6.60	59.68	247.74
14	Waldo Evans.	45.60	4.66	49.20	39.72	7.02	15.45	12.36	9.33	6.06	56.80	246.20
15	Horace G. Macfarland.	47.10	5.42	50.55	36.60	6.00	14.35	11.76	10.56	6.38	56.32	245.04
16	Noble E. Irwin.	44.85	5.92	50.10	36.24	6.90	15.95	11.04	10.29	5.94	55.36	242.59
17	Harley H. Christy.	43.35	4.74	51.00	39.00	7.34	13.85	12.24	9.84	5.70	55.52	242.58
18	Dion Williams.	49.05	5.36	48.90	33.00	5.64	14.40	12.32	10.44	6.50	56.96	242.57
19	Thomas J. Senn.	43.80	4.38	46.95	38.28	6.78	14.80	11.12	9.90	5.22	56.48	237.71
20	Lucien G. Smith.	44.70	4.24	47.25	32.88	5.78	14.25	11.60	11.04	6.96	57.76	236.46
21	John G. F. Mosle.	45.60	5.80	44.10	34.20	6.00	12.65	11.08	10.20	5.74	59.84	235.21
22	Robert L. Flowers.	43.95	5.06	46.20	32.40	6.52	14.15	10.56	10.29	6.14	59.36	234.63
23	Harry H. Caldwell.	44.40	5.62	46.45	36.84	5.92	14.30	11.20	9.90	5.82	48.64	231.09

Merit-roll of the Naval Cadets of the First Class—Line Division—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	MERIT-ROLL—FIRST CLASS.										Aggregate.
		Drumming, naval construction, and naval tactics.	Drumming, practice live cruiser.	(Drumming and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Discipline.	
	Maxima	60	6	60	45	6	20	16	12	8	64	364
24	Rufus H. Lane	44.70	5.08	47.40	32.76	5.12	13.40	10.12	10.71	6.40	52.16	227.65
25	Elton B. Elmer	42.45	3.60	44.10	37.44	7.04	13.75	10.44	9.39	5.50	52.45	228.19
26	Elsie Thell	42.75	5.14	44.25	32.52	6.20	11.40	10.76	6.97	5.90	57.60	225.49
27	James F. Carter	41.85	5.26	45.00	33.12	6.88	12.50	10.72	9.03	6.30	53.28	224.54
28	Richard H. Leigh	39.75	5.16	45.30	32.88	6.18	12.80	10.68	9.27	5.56	56.80	224.38
29	Jay H. Rypher	45.60	5.80	47.10	33.72	5.74	13.00	10.84	10.53	6.90	44.96	224.19
30	Charles F. Preston	40.26	4.44	44.10	32.52	6.68	12.90	10.00	9.45	6.72	56.96	222.72
31	Adelbert Althous	41.25	4.84	42.90	33.36	6.56	13.20	9.60	10.11	5.44	54.24	222.17
32	William D. Brotherton	43.25	4.54	46.20	32.52	6.66	14.16	10.56	9.12	6.04	49.28	221.08
33	Albert S. McLamore	40.65	4.02	43.06	30.84	6.64	12.76	10.06	9.76	5.24	56.16	219.21
34	Frank H. Kocherberger	42.15	4.56	42.60	32.04	6.82	11.96	10.56	9.81	6.02	51.68	217.19
35	William N. McKelvy	40.95	4.38	39.45	29.00	5.92	11.20	10.44	10.38	5.66	55.52	216.90
36	Harry B. Smith	41.25	4.54	42.75	30.84	6.02	11.85	9.48	8.79	5.64	54.56	215.72
37	Louis H. Gross	39.00	4.02	43.50	30.60	5.66	12.50	9.32	9.97	5.64	51.52	211.63
38	George Richards	41.40	4.48	42.50	32.40	5.26	13.06	10.00	9.68	6.20	42.08	208.12
39	Irving Elmer	39.15	2.86	39.45	28.40	5.74	11.40	10.00	8.97	5.26	49.76	205.01
40	Magdalen Niro	39.40	4.66	38.10	27.00	5.10	9.80	8.76	8.08	5.10	45.32	190.27
41	David Van H. Allen		1.90			6.12						

a Japanese student. Withdrawn at the end of the first year's course.

Merit-roll of the Naval Cadets of the First Class—Engineer Division—Annual Examination, June, 1891.

Order of annual merit.	NAME	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics and chemistry.	Physiology and hygiene.	Discipline.	Aggregate.
	Maxima	32	48	40	32	20	40	20	8	64	304
1	John K. Robison	26.56	39.00	32.90	27.44	17.60	33.80	16.75	5.26	48.16	247.47
2	Milton E. Reed	25.04	38.04	28.70	27.60	19.15	26.30	17.45	6.38	56.80	245.46
3	John H. Bowen	25.28	36.12	27.60	25.44	19.55	31.60	16.20	5.64	49.28	236.71
4	Charles R. Emrich	23.60	33.36	26.90	24.08	18.50	26.90	13.80	5.86	52.80	225.80
5	Wm. H. McGrann	23.36	34.20	26.00	24.00	17.80	27.20	13.85	6.46	51.20	224.07
6	George H. Shepard	21.12	32.76	26.50	23.04	15.80	30.40	14.35	5.92	46.88	216.77
7	George W. Laws	21.68	31.08	26.30	22.00	16.10	26.80	13.80	5.82	48.96	212.54

*Merit-roll of the Naval Cadets of the Second Class—48 members—Annual Examination—
June, 1891.*

Order of annual merit.	NAME.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and me- chanics.	Physics and chem- istry.	French.	Mechanical drawing.	Discipline.	Aggregate.
		12	12	22	12	48	40	12	12	48	225
1	John D. Bouret	9.09	11.40	30.72	10.80	45.84	37.70	10.92	11.46	62.20	211
2	Joseph E. McDonald ..	10.14	10.62	28.40	10.62	45.00	34.80	9.48	10.92	65.24	208
3	Howard W. Huntington	11.07	9.93	30.00	9.63	37.32	33.30	8.82	10.98	64.16	207
4	John H. Porter	8.52	10.41	29.92	10.17	39.12	35.40	9.39	10.68	60.92	194
5	Homer L. Ferguson ..	9.06	10.06	26.72	9.33	40.32	31.60	11.16	10.76	62.60	194
6	Gregory C. Davison ..	9.03	9.81	27.52	9.99	43.92	32.40	8.79	10.08	61.52	190
7	George C. Day	9.96	10.08	27.84	10.02	40.32	31.60	9.54	10.65	62.08	190
8	Luke McNamee	9.36	10.20	24.80	9.66	40.08	32.80	10.08	10.86	65.00	190
9	Charles L. Hussey	9.24	9.93	26.72	10.89	39.48	31.40	9.81	10.74	64.64	187
10	Joseph R. Campbell ..	8.73	10.20	26.08	10.26	38.64	32.40	9.87	11.20	62.08	187
11	Frederick L. Sawyer ..	9.21	10.17	27.08	9.96	36.40	32.00	9.09	10.56	64.20	186
12	Charles T. Jewell	9.72	9.45	25.60	9.39	36.84	32.50	8.94	11.10	61.64	186
13	Holden A. Evans	9.57	10.59	25.44	10.11	37.44	30.80	9.57	9.39	65.00	185
14	John R. Y. Blakely	8.31	9.87	24.72	8.61	41.88	31.50	10.05	11.40	60.80	185
15	William C. Dawson ...	9.15	10.17	23.92	9.96	34.80	32.30	11.70	9.54	63.20	185
16	Leon R. Thompson	8.82	9.24	24.32	9.99	35.04	30.20	9.96	9.12	62.96	185
17	John F. Hines	8.67	9.57	24.80	9.84	34.20	27.00	8.16	10.71	65.00	185
18	Fred R. Payne	8.31	8.25	25.28	9.60	37.80	34.30	8.67	7.74	25.28	185
19	James Sheehan	8.76	8.64	22.16	9.51	33.12	27.20	9.63	10.89	60.80	185
20	John T. Myers	8.37	8.91	22.40	9.57	34.56	26.30	8.94	10.61	60.48	185
21	Frederick A. Traut	8.34	8.97	24.80	9.60	31.32	26.80	10.62	10.92	39.76	185
22	Stanford E. Moore ..	8.43	8.31	21.92	10.26	30.00	26.10	10.44	10.71	62.24	185
23	Robert K. Crank	8.16	8.40	22.80	9.69	31.92	27.80	9.49	9.69	39.24	185
24	Austin R. Davis	7.86	8.07	21.84	8.07	35.16	26.00	9.39	10.03	60.08	185
25	Edward R. Kellogg	8.43	7.98	22.80	10.05	30.48	25.90	7.92	9.48	62.20	185
26	Benjamin H. McCormick	8.37	8.04	20.32	9.72	30.00	25.40	10.56	10.80	62.20	185
27	Joel R. P. Pringle	8.52	9.08	20.96	9.72	31.56	26.10	10.83	8.07	60.80	185
28	George Mallison	8.43	8.34	22.16	9.27	31.44	29.20	8.79	8.85	28.76	185
29	Thomas L. Stitt	8.13	8.22	20.80	9.51	30.48	25.90	9.09	10.17	62.44	185
30	Powers Symington ...	8.46	8.58	21.20	8.76	30.48	27.10	10.35	9.00	60.68	185
31	Aaron L. Cumble	7.50	7.53	22.16	8.94	30.96	28.10	9.06	9.38	61.76	185
32	Walter Hall	8.37	8.55	22.24	9.42	34.44	28.10	8.04	9.08	25.94	185
33	Yates Mcring, Jr.	8.40	8.67	21.68	8.79	35.88	26.10	8.31	8.34	34.08	185
34	George H. Mather	9.24	8.88	21.68	8.94	31.20	26.80	8.24	8.22	29.28	185
35	R. Del. Haskins	8.22	8.4	21.92	9.84	30.12	25.70	8.58	10.68	39.28	185
36	Theodore H. Low	8.25	9.15	20.00	9.42	31.68	26.30	8.67	9.27	27.08	185
37	Charles F. Macklin ..	8.13	8.40	20.24	9.42	31.56	25.80	7.92	8.69	61.84	185
38	Washington D. Gibbs ..	8.40	8.10	21.84	8.40	27.30	26.80	8.52	7.89	34.22	185
39	Arthur Rice	7.95	8.10	22.80	9.51	28.32	25.40	9.51	11.19	62.68	185
40	Thomas R. Burden	8.43	7.92	20.32	9.45	29.60	26.30	10.17	9.84	61.76	185
41	John H. Russell, Jr.	8.91	7.83	19.44	9.24	30.60	26.70	8.13	8.73	62.08	185
42	Frederick W. Stanford ..	9.91	8.22	20.00	8.88	29.40	25.80	9.30	8.31	38.12	185
43	Stanley P. Bennett ..	7.88	7.11	20.00	9.71	29.28	24.50	8.31	8.04	39.28	185
44	Joseph C. Brockbridge ..	7.74	7.17	18.72	8.79	27.24	24.10	9.57	7.83	27.68	185
45	William E. Holdstock ..	.....	.....	.....	9.00	.....	.....	.....	.....	.....	.....
46	Emmett R. Pollock .....	.....	.....	.....	9.54	.....	.....	.....	.....	.....	.....
47	Warren Holney .....	.....	.....	.....	8.91	.....	.....	.....	.....	.....	.....
48	Christian C. Hillman ..	.....	.....	.....	11.01	.....	.....	.....	8.61	62.08	.....

*Merit-roll of the Naval Cadets of the Third Class—56 members—Annual Examination,
June, 1891.*

Order of annual merit.								
*1	William S. Montgomery	39.40	18.65	14.44	14.40	23.16	29.20	138.18
*2	Wilfred Van N. Fowleson	38.00	16.95	14.64	17.40	22.56	29.28	138.83
*3	Edwin A. Elder	35.70	16.80	14.24	17.85	22.11	28.08	136.73
*4	Louis J. McGill	35.30	15.95	18.72	18.60	23.56	29.20	136.35
*5	Claude E. Fitch	31.90	17.90	18.90	17.80	24.12	28.64	123.56
*6	Frank H. Clark, Jr.	34.60	15.25	13.40	17.10	23.64	29.36	122.25
*7	Eugene L. Biset	33.50	17.25	14.16	18.60	21.54	28.08	130.98
*8	Daniel C. Nutting, Jr.	29.30	17.50	14.56	17.80	22.26	29.12	130.34
*9	Maurice E. Peugeot	27.40	14.50	14.12	20.65	23.70	29.12	129.41
10	Charles J. Lang	32.10	15.30	13.28	17.11	24.12	28.96	128.86
11	Walter S. Cronley	32.00	15.45	13.80	16.60	21.66	28.04	127.85
12	Joseph G. Goff	33.20	14.45	13.96	17.15	20.76	28.16	127.68
13	Thomas D. Parker	31.10	15.40	14.00	19.20	19.86	27.92	127.48
14	Henry H. Ward	31.80	16.15	13.04	17.20	22.98	25.76	126.93
15	John S. Doddridge	33.90	15.95	14.00	14.80	19.80	28.00	124.45
16	Edward H. Campbell	37.80	14.15	12.12	14.60	21.48	26.08	126.23
17	Thomas S. Kellogg	31.60	13.75	13.36	16.50	21.66	27.42	125.47
18	Allen M. Cook	32.40	13.80	13.12	13.95	23.52	28.56	125.35
19	Henry B. Price	26.80	14.75	14.32	16.55	23.64	29.12	125.18
20	Joseph A. Perry	33.00	14.00	12.80	14.60	21.30	28.64	124.64
21	William K. Gise	28.40	14.25	14.08	17.55	22.32	27.68	124.28
22	Thomas S. Wilson	30.30	14.80	13.64	14.80	21.54	28.40	123.78
23	Orton P. Jackson	30.40	13.70	12.76	16.10	21.66	28.64	123.26
24	Martin E. Trench	28.80	15.80	12.92	14.30	21.76	28.32	121.92
25	John B. Brady	30.10	14.15	12.60	16.75	21.54	27.04	121.18
26	John P. J. Ryan	27.70	13.90	12.64	16.25	23.76	27.36	120.81
27	David M. Berry	26.60	14.90	12.40	14.60	23.40	28.88	120.66
28	Frank B. Upham	30.40	13.90	13.04	16.10	18.60	29.04	120.48
29	Chester Wells	28.40	16.10	13.12	15.15	20.22	27.36	120.35
30	John B. Morris	30.70	15.60	12.68	14.95	18.42	27.92	120.27
31	Peter O. Hains, Jr.	27.70	13.95	11.96	14.75	22.86	28.64	119.86
32	Henry A. Pearson	27.20	14.10	12.12	14.50	20.76	29.12	118.80
33	Frank L. Chadwick	30.00	14.10	12.72	16.15	18.18	27.60	118.75
34	Richard Sturdevant	25.00	13.60	12.96	14.65	21.90	28.56	118.67
35	William G. Powell	25.60	12.75	11.32	15.85	23.11	27.04	118.64
36	Percy N. Olmsted	25.70	12.55	11.84	14.35	21.60	29.36	116.50
37	Frank De W. Read	25.30	13.50	12.32	15.90	21.11	26.96	115.28
38	Richard S. Douglas	26.20	13.05	12.60	15.45	19.68	27.28	114.26
39	John L. Sticht	27.60	13.35	12.96	14.10	19.06	27.92	114.19
40	Christopher C. Fewel	30.20	14.25	12.08	15.11	17.70	25.28	114.11
41	Alfred A. McKethan	26.00	13.20	12.12	13.60	19.86	28.40	113.18
42	Marvin Carver	25.90	13.20	12.76	15.11	21.30	28.64	112.80
43	Gerald L. Holsinger	26.20	13.50	12.76	15.05	17.94	25.96	112.41
44	John A. Crocker	26.00	13.10	11.72	13.95	20.76	28.40	111.93
45	Alfred A. Pratt	25.60	13.40	12.88	13.65	16.84	25.12	109.49

Merit-roll of the Naval Cadets of the Third Class—56 members—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Disciplines.	Aggregate.
		40	30	10	20	24	22	146
46	Guy T. Scott.....	25.70	12.85	12.36	12.65	12.73	25.76	124
47	André M. Procter.....	26.10	12.60	11.44	12.35	21.06	22.04	120
48	James B. Potter	25.20	12.05	12.12	14.85	17.26	25.04	120
49	Edward C. Stearns	24.10	11.90	11.68	14.40	22.56	22.92	118
50	Walter B. Whitman.....	24.50	12.60	12.04	15.05	18.73	22.04	118
51	James S. Coleman.....	25.80	12.80	11.64	15.10	19.02	25.22	122
52	Worth Bagley	24.20	12.50	11.80	15.95	17.76	25.25	120
53	William G. Grosbeck.....	25.10	11.20	11.48	15.40	20.70	22.24	118
54	Lewis C. Baird	18.80	7.90	10.96	11.90	20.82	22.40	103
55	Lewis Benson Jones.....	"	"	11.44	"	"	27.20	—
56	Louis G. Asbury, jr	"	"	"	"	"	"	—

Merit-roll of the Naval Cadets of the Fourth Class—72 members—Annual Examination, June, 1891.

Order of annual merit.	NAME.				
	Maxima				
*1	Thomas G. Roberts	19.50	18.25	17.80	14.75
*2	William P. Robert	19.25	17.05	17.30	15.25
*3	Daniel H. Cox	17.85	17.40	17.10	15.04
*4	John T. Tompkins	19.65	17.00	18.10	14.64
*5	Hidley McLean	18.35	17.15	16.65	14.08
*6	Raymond Stone	15.80	17.20	17.10	15.12
*7	Malville J. Shaw	15.25	17.70	19.00	14.92
*8	Irvin Van G. Gillis	19.45	16.10	16.20	14.92
*9	Walter J. Mason	18.80	16.15	17.25	14.92
*10	Alexander T. Hull	18.50	17.15	18.25	14.60
*11	Fritz L. Sanders	14.15	16.30	19.05	15.05
*12	Charles Webster	15.95	16.10	17.60	15.10
*13	David F. Sellers	15.15	16.35	18.50	15.04
*14	Prevoost Babie	16.45	17.75	17.15	14.10
15	L. Barton Jones	15.35	16.45	17.85	14.72
16	Krust L. Bennett	15.00	16.30	17.60	14.75
17	Winston Churchill	14.80	16.20	18.15	14.40
18	George W. Ryan	14.70	15.65	17.75	15.04
19	Stephen V. Graham	15.20	15.50	18.10	14.22
20	Simon P. Fullinwider	16.75	15.45	15.40	14.92
21	Ignatius T. Cooper	16.50	15.45	15.60	14.75
22	Arthur G. Kavanagh	17.25	15.10	16.20	13.32
23	John M. Hudgins	18.25	15.10	15.45	14.40
24	Alfred W. Hinds	15.55	15.10	15.45	14.40
25	Leland F. James	14.10	15.15	17.70	14.20
26	Roscoe Spear	15.10	15.95	16.65	14.10
27	Boling K. McMorris	15.25	16.30	14.95	14.55
28	Randolph Ridgely, Jr.	14.40	15.10	16.70	14.85
29	John McC. Luby	14.30	15.10	17.05	14.44
30	Lawrence S. Adams	14.05	14.00	17.25	14.53
31	Robert W. McNeely	13.90	16.10	15.10	14.80
32	Hutch I. Coon	14.95	14.95	14.55	14.65
33	Robert H. Osborn	13.30	14.90	15.10	14.25
34	Frederick K. Perkins	15.25	14.95	15.55	12.75
35	Clarence England	15.10	15.10	14.55	14.20
36	Emery Winship	14.00	14.20	15.20	14.44
37	Roscoe C. Moody	13.30	14.25	16.65	14.40
38	Moulton K. Johnson	12.70	15.10	15.90	14.50
39	Roscoe C. Palmer	15.10	15.05	14.55	14.64
40	Charles B. Bookwalter	15.20	14.10	14.65	14.40
41	William P. Scott	15.10	14.45	14.65	14.25
42	Henry T. Baker	13.00	15.00	14.50	14.40
43	Arthur T. Chester	15.25	13.85	13.30	14.10
44	William S. Whitford	14.30	14.70	13.55	14.75
45	Charles A. Lane	12.75	14.75	13.65	14.10

Merit-roll of the Naval Cadets of the Third Class—56 members—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Aggregate.
		40	20	16	20	24	22	122
46	Guy T. Scott.....	25.70	12.85	12.26	13.65	18.78	25.75	109.29
47	André M. Procter.....	26.10	12.60	11.44	13.35	21.05	22.04	106.79
48	James B. Potter.....	26.20	13.05	12.12	14.85	17.25	25.84	109.26
49	Edward C. Stearns.....	24.10	11.80	11.26	14.40	22.55	22.05	111.96
50	Walter B. Whitman.....	24.50	12.60	12.04	15.05	18.78	25.04	111.94
51	James S. Coleman.....	25.80	12.80	11.64	15.10	19.02	22.22	112.79
52	Worth Bagley.....	24.20	12.50	11.80	15.95	17.75	25.25	107.69
53	William G. Gruenbeck.....	25.10	11.20	11.48	15.40	20.70	22.24	106.12
54	Lewis O. Baird.....	18.80	7.90	10.05	11.90	20.22	22.60	92.56
55	Lewis Benson Jones.....	"	"	11.44	"	"	27.20	—
56	Louis G. Asbury, jr.....	"	"	"	"	"	"	—

Merit-roll of the Naval Cadets of the Fourth Class—72 members—Annual Examination, June, 1891.

Order of annual merit.	Maxims					
		90	90	90	10	70
*1	Thomas G. Roberts	19.50	18.25	17.80	14.75	70.31
*2	William P. Robert	19.25	17.85	17.30	15.25	69.75
*3	Daniel H. Cox	17.85	17.40	18.50	15.04	68.79
*4	John T. Tompkins	19.65	17.00	18.40	14.84	67.89
*5	Ridley McLean	18.35	17.15	16.85	14.88	67.23
*6	Raymond Stone	18.90	17.20	18.80	15.12	66.92
*7	Melville J. Shaw	18.25	17.70	19.00	14.92	66.87
*8	Irvin Van G. Gillis	18.45	16.10	18.90	14.92	66.37
*9	Walter J. Manion	16.80	16.15	18.25	14.92	66.12
*10	Alexander T. Hall	15.60	17.15	18.35	14.60	65.60
*11	Fritz L. Sanders	14.15	16.30	19.95	15.08	65.48
*12	Charles Webster	15.95	16.65	17.60	15.00	65.20
*13	David F. Sellers	15.15	16.35	18.50	15.04	65.04
*14	Prevaost Babine	16.65	17.75	16.45	14.88	64.73
15	L. Burton Jones	15.25	16.45	17.85	14.72	64.37
16	Ernest L. Bennett	15.00	16.30	17.60	14.76	63.66
17	Winston Churchill	14.60	16.30	18.15	14.40	63.55
18	George W. Ryan	14.70	15.85	17.75	15.04	63.14
19	Stephen V. Graham	15.20	15.50	18.10	14.32	63.12
20	Simon P. Fullinwider	16.75	15.65	15.40	14.92	62.72
21	Ignatius T. Cooper	16.50	15.45	15.60	14.76	62.31
22	Arthur G. Kavanagh	17.25	15.50	16.20	13.22	62.97
23	John M. Hudgins	18.25	13.85	15.45	14.40	61.95
24	Alfred W. Hinds	15.65	15.10	16.45	14.40	61.59
25	Leland F. James	14.10	15.15	17.70	14.20	61.15
26	Roscoe Spear	13.95	15.95	16.65	14.52	61.07
27	Bolling K. McMorris	15.25	18.30	14.95	14.56	61.06
28	Randolph Ridgely, jr	14.40	15.05	16.70	14.88	61.03
29	John McC. Luby	14.20	14.25	17.05	14.44	60.04
30	Lawrence S. Adams	14.05	14.00	17.25	14.52	59.22
31	Robert W. McNeely	13.80	16.10	14.85	14.80	59.65
32	Hutch L. Coss	14.95	14.85	14.55	14.68	59.13
33	Robert H. Osborn	13.20	14.90	15.85	14.68	59.01
34	Frederick K. Perkins	15.25	14.95	15.85	12.76	58.91
35	Clarence England	14.25	15.85	14.55	14.20	58.85
36	Emery Winship	14.00	14.20	16.20	14.44	58.84
37	Roscoe C. Moody	13.20	14.25	16.65	14.40	58.60
38	Monilton K. Johnson	12.70	15.10	16.90	14.60	58.20
39	Roscoe C. Bulmer	13.65	15.05	14.55	14.64	58.09
40	Charles S. Bookwalter	13.20	15.35	14.65	14.40	57.60
41	William P. Scott	13.65	14.45	14.65	14.24	57.59
42	Henry T. Baker	13.60	15.00	14.50	14.40	57.50
43	Arthur T. Chester	15.35	13.85	13.30	14.68	57.28
44	William S. Whittied	14.20	14.70	13.55	14.76	57.37
45	Charles A. Lane	12.75	14.75	13.65	14.60	56.71

Merit-roll of the Naval Cadets of the Fourth Class—72 members—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Aggregate.
		20	20	20	16	76
	Maxima.....					
45	Philip B. Winn.....	14.35	13.45	13.90	15.00	56.70
47	Claude N. Andrews.....	12.65	13.40	16.50	14.12	56.67
48	George L. P. Stone.....	13.35	13.65	15.10	14.44	56.54
49	Frank Lyon.....	13.90	14.05	14.90	13.60	56.45
50	Ralph H. Chappell.....	14.35	13.85	13.60	14.60	56.40
51	Benjamin G. Crosby.....	12.80	12.75	16.25	14.40	56.20
52	Gilbert S. Galbraith.....	13.15	13.80	14.50	14.64	56.09
53	Joseph M. Reeves.....	12.85	13.75	13.85	14.84	55.29
54	Claude W. Griffith.....	13.50	13.50	13.90	14.24	55.14
55	Walter S. Turpin.....	12.80	13.55	13.85	14.48	54.68
56	Edwin H. Delany.....	13.15	14.25	13.30	13.16	53.86
57	George E. Gilm.....	12.75	13.50	13.15	14.48	53.88
58	Henry M. Walker.....	12.50	12.75	12.70	14.68	52.63
59	John R. Berryman.....	12.55	12.85	14.20	12.64	52.24
†	Carlton F. Snow.....	12.25	14.35	14.20	14.64	51.44
jr	Edward H. Watson.....	11.15	14.80	14.35	14.58	54.88
†	Paul M. La Bach.....	12.10	14.40	13.65	14.22	54.37
jr	Edward L. Batts.....	12.00	13.25	13.70	14.80	53.75
jr	Walter B. Inard.....	10.35	15.05	13.55	14.28	53.23
jr	Thomas T. Craven.....	12.00	13.55	12.40	14.40	52.35
jr	Murray Baldwin.....	11.80	15.25	13.05	12.08	52.18
jr	Michael J. McCormack.....	11.85	13.45	12.35	14.48	52.13
jr	George T. Greer.....	12.50	12.50	11.75	13.98	51.11
jr	Eckford C. De Kay.....	10.55	13.00	13.80	12.16	50.51
90	George H. Mann.....	"	"	"	14.75	-----
90	James D. C. De Jarnette.....	"	"	"	13.80	-----
90	Arthur B. Knery.....	"	"	"	14.84	-----

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and *act of Congress approved August 5, 1882.*)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and *act of Congress approved June 17, 1878.*)

III. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

IV. Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be not less than fifteen nor more than twenty years of age, and physically sound, well formed, and of robust constitution.—(*Rev. Stat.*, § 1517, and *act of Congress approved March 2, 1889.*)

V. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examinations shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners." (*Rev. Stat.*, § 1515.)

VI. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

VII. "Naval cadets found deficient at any examination shall not be continued at the Academy or in the service unless upon the recommendation of the Academic board."—(*Rev. Stat.*, § 1519.)

VIII. "The academic course of *naval cadets* shall be six years."—(*Rev. Stat.*, § 1520.)

IX. Candidates that may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the superintendent for examination for admission. Those that may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examinations.

No leaves of absence will be granted to cadets of the fourth class.

EXAMINATION.

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz.:

- Feeble constitution, inherited or acquired;
 - Retarded development;
 - Impaired general health;
 - Decided cachexia, diathesis, or predisposition to disease;
 - Any disease, deformity, or result of injury that would impair efficiency; such as—
 - Weak or disordered intellect;
 - Cutaneous or communicable disease;
 - Unnatural curvature of spine, torticollis, or other deformity;
 - Inefficiency of either of the extremities or large articulations from any cause;
 - Epilepsy or other convulsions within five years;
 - * Impaired vision, disease of the organs of vision, imperfect color sense;
 - Impaired hearing or disease of the ear;
 - Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
 - Impediment of speech to such an extent as to impair efficiency in the performance of duty;
 - Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
 - † Hernia or undescended testis;
 - Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
 - Disease of the genito-urinary organs;
 - ‡ Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.
- † Attention will also be paid to the stature of the candidate, and no one man/under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

Table showing the minimum height for admission, for each year between the ages of fifteen and twenty years.

Age.....	15	16	17	18	19
Height (inches)	60	60½	62	62½	63

Table showing mean height, weight, and chest-girth of lads between the ages of fifteen and twenty years.

Age.....	Height (without clothes).	Weight (including clothes).	Chest girth (without arms).
	Inches.	Pounds.	Inches.

15.....
16.....
17.....
18.....
19.....
20.....
.....

- Add to par. X, page 66, Academy Register, 1891-92.
- Visual acuteness must not fall below *fifteen-twentieths* of the normal in either eye.
 - † Hernia, *complete or incomplete*, or undescended testis.
 - ‡ *Loss of many teeth, or the teeth generally unsound.*

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or concrete, and to use with facility the tables of money, weights, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude and *vice versa*!

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; *e. g.*,

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they

Articles marked *a* will not be taken on board the practice ship.
Of the articles marked *b* cadets entering in September must have four each.
The articles marked *c*, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.
Each naval cadet must on admission deposit with the pay-officer the sum of £10 for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles, — beside those enumerated in the preceding article.
All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$10 00
Deposit for books, etc	2 00
<hr/>	
Total amount required	12 00

The value of clothing brought from home is to be deducted from this amount.
Each naval cadet one month after admission will be credited with the amount of his actual expenses in traveling from his home to the Academy.

5. Give an account of the formation and adoption of the Constitution.
Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz.:

One dress jacket	\$20.50	One jack knife	\$0.70
One blouse.....	11.50	Six sheets.....	3.36
Two pairs trousers	22.00	Hammock clews.....	.51
Two working suits	1.86	One pair of bathing trunks .....	.20
One overcoat.....	23.00	Three pairs of white thread gloves .....	.60
One rubber coat.....	4.00	Two black silk neckties.....	.64
One rubber hat.....	.55	Two clothes bags.....	.46
Two pairs of regulation leggins..	1.40	One hammock mattress.....	2.85
One parade cap.....	2.55	aOne requisition book .....	.40
One knit cap.....	.66	aOne pass book .....	.40
One mug.....	.10	aStencil, ink, and brush.....	.45
One soap box.....	.62	aOne bottle of indelible ink .....	.18
One laundry book.....	.34	aOne wash basin and pitcher....	.88
One pair of blankets	2.90	aOne pair of gymnasium slippers..	1.10
Two pairs of high shoes	6.80	*One whisk .....	.13
One pair of overshoes.....	.53	*One coarse comb .....	.13
Eight white shirts	8.00	*One cake of soap.....	.10
Twelve linen collars.....	2.04	*One hair brush.....	.50
Eight pairs of cuffs.....	2.00	*Stationery .....	.50
*Eight pairs of socks.....	1.84	*Twelve white handkerchiefs....	2.76
*Eight towels	2.00	*One pair of suspenders .....	.40
*Shaving outfit	1.61	*Four night shirts.....	2.52
*Four pairs of drawers (winter)..	4.00	*One toothbrush .....	.23
bFour pairs of drawers (summer)..	1.52	*Thread and needles.....	.19
*Four undershirts (winter).....	4.00	*Blacking brush and blacking...	.57
bFour undershirts (summer).....	1.52	*Nail brush .....	.25
One hand glass.....	.36		
			21.01
	128.20		

When moving into cadet quarters, cadets will supply themselves with the following articles, viz.:

aTwo bedspreads.....	\$2.84	One mirror.....	\$1.21
aTwo pairs of drill gloves	1.00	aOne rug.....	.80
aOne slop jar.....	.90	aOne hair mattress	5.10
aTwo spatter-cloths .....	.66	aOne broom.....	.25
One hair pillow.....	.75	Six pillow cases	1.38
	6.15		8.74

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship, viz.:

Three working suits.....	\$2.79	One pair rubber leggins	\$0.40
Four woolen shirts	7.40	One pair of high shoes.....	3.40
Three white sailor hats.....	.93	One knit cap.....	.66
	11.12		4.46

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b* cadets entering in September must have four each.

The articles marked *c*, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must on admission deposit with the pay-officer the sum of \$25, for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles beside those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$179. 00
Deposit for books, etc	20. 00
	<hr/>
Total amount required	199. 00

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of citations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra. Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: "Natural method of teaching languages."	La Parole Française, Sauveur and Van Daell. Bellows's Pocket Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Mathematics.	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate co-efficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Hall and Knight's Higher Algebra Bowditch's Useful Tables
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry
English Studies, History, and Law.	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of letters and telegrams. Themes.	A. N. Hill's Rhetoric. Ayres's Orthoepist.* Ayres's Verbalist.* Webster's Dictionary.*
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States, by notes or lecture.	Eliot's History of the United States. Mitchell's Atlas.*
Modern Languages	5.	4	FRANÇOIS: "Natural Method."	Berri's La Langue Française, 1 ^{re} partie Histoire d'un Français Hollows's Pocket Dictionary.*
			SPANISH: (Given as an advanced course) "Natural Method"	Worman's First Spanish Book Serano's Dictionary.* Dreyer's Cumulative Method and German Verbal Drill.
			GERMAN: (Given as an advanced course) "Natural Method"	Wendelach and Schenk's Deutsche Grammatik Whitney's Dictionary.*

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles, trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles, construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry. Todhunter's Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>	2	1	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People. Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verbalist.* Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Modern Languages.</i>	3	4	FRENCH: "Natural method." SPANISH: (Given as an advanced course.) "Natural method." GERMAN: (Given as an advanced course.) "Natural method.	Bücher's Series of French Plays. Bercy's La Langue Française, 2 ^e partie. Bellows's Dictionary.* Sauveur's Petite Grammaire. Ybarra's English-Spanish Method. Dreyspring's Cumulative Method and German Verb Drill. Wenckebach und Schrakamp's Deutsche Grammatik. Jeffcott & Tossell's German Newspaper Reading Book. Whitney's Dictionary

COURSE OF INSTRUCTION.

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Mechanical Drawing.	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Tomlin's Machine Construction.*

SECOND TERM.

Physics and Chemistry.	5	4	PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures. CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations, and the determination of simple salts, acids, and bases. Lectures.	Daniell's Principles of Physics. Practical Physics, by Stewart and Gee. Remsen's General Chemistry. Remsen's Organic Chemistry. Lecture Notes.
Mathematics.	1	4	DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single-curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axonometric projections; shades and shadows.	Church's Descriptive Geometry.
	4	4	ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of coordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.	C. Smith's Conic Sections. Aldis's Solid Geometry.

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	2	4	FRENCH: Course of the first term continued. SPANISH: Course of the first term continued. GERMAN: Course of the first term continued.	Same as for the first term.
<i>Mechanical Drawing.</i>	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Tomkin's Machine Construction.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Seamanship, Naval Construction, and Naval Tactics.	1	4	SEAMANSHIP: Description and uses of sails, their fittings and appliances; handling sails, port drills and evolutions; management under sail; duties of officers and crew.	Luce's Seamanship.
Naval Engineering.	3	4	PRINCIPLES OF MECHANISM: Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers; comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention; types of marine engines, including condensers and pumps, with explanation of the use of all the parts; screw propellers and paddle wheels; the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Goodeve's Elements of Mechanism. Sennett's Marine Steam Engine.
Mechanics and Applied Mathematics.	6	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	6	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centres of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's Integral Calculus. Johnson's Differential Equations.
Physics and Chemistry.	4	4	PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory, experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Geo. Kohlrausch's Physical Measurements. Lecture Notes.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Professional French Reader. Bellows's Pocket Dictionary.* Sauveur's Petite Grammaire.* Langage Marin, Anglais-Français.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction.*

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coördinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	Young's General Astronomy. Bowditch's Navigator. American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3	4	Course of the first term continued.	Same as for the first term.
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.

THIRD YEAR—SECOND CLASS—Continued.
SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Physics and Chemistry.	4	4	PHYSICS: Recitations in light and heat concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the co-efficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skilful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as for the first term. Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements.* Lecture Notes.
Modern Languages.	1	1	FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	Same as for the first term and French newspapers.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	3	4	<p>SEAMANSHIP: Uses of compass, lead, log, and sounding machines; principles of marlin-spike seamanship, including cutting, fitting, and reeving rigging; description and uses of sails, their fittings and appliances; stowage and organization; management of boats; handling sails; management under sail and under steam; turning and maneuvering, wharfing, docking, towing, piloting, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; control of behavior among waves, and performance in general.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship, section, and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamanship.</p> <p>Special Notes and Drawings.</p> <p>Navy Department Pamphlets.</p> <p>White's Manual of Naval Architecture.</p> <p>Thearle's Naval Architecture.</p> <p>Thearle's Theoretical Naval Architecture.</p> <p>Welch's Text-book of Naval Architecture.</p> <p>Navy and International Signal Books.</p> <p>Fleet Drill Book (Navy Department).</p>
Ordnance and Gunnery.	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Gunnery Drill Book for the New Armaments. (Bureau of Ordnance publication.)</p> <p>Instructions for Infantry and Artillery, United States Navy.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Ordnance and Gunnery—Continued.			INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers. GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.	Instructions for Infantry and Artillery, United States Navy. Text-book of Ordnance and Gunnery (Naval Academy publications). Exterior Ballistics (Naval Academy publication). Ordnance Notes (1898). Naval Intelligence.
Astronomy, Navigation, and Surveying.	4	4	THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances. THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling error.	Chauvenet's Spherical and Practical Astronomy.* Walker's Navigation. Dowditch's Navigator. American Ephemeris and Nautical Almanac. Admiralty Manual for the Deviations of the Compass.
Mechanics and Applied Mathematics.	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Elasticity; stress and strain; theory of structures, strength and deflection of beams; beams of unsymmetrical section.	Cottrell and Shedd's Lectures on Applied Mechanics. Cottrell's Applied Mechanics.*

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Physics and Chemistry.	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric light wires; experiments upon induction; practice in photography and micro photography.	Same as for the second class year. Lecture Notes.

SECOND TERM.

Seamanship, Naval Construction, and Naval Tactics.	4	4	Course of the first term continued.	Same as for the first term.
Ordnance and Gunnery.	5	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors that arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication).</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Accuracy and Probability of Fire (Naval Academy publication).</p> <p>Nomenclature of steel B. L. R. guns and carriages, and mounts for Hotchkiss guns. (Bureau of Ordnance.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.
SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Astronomy, Navigation, and Surveying.	4	4	THEORY OF THE DEVIATION OF THE COM- PASS: Course of the first term continued.	Admiralty Manual for the Deviations of the Compass.
			HYDROGRAPHIC SURVEYING: The instru- ments used; selection and measurement of base; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observa- tions; current observations; sailing di- rections; the form of the earth, with special reference to the construction of charts; projections; running surveys; PRACTICAL NAVIGATION.	Chauvenet's Spherical and practical Astron- omy.* Belcher's Practical Marine Surveying. Projection Tables.
English Studies, History, and Law.	2	4	INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retor- tion; blockade; contraband of war; right of search; ship's papers and nationality; prize; privateering; piracy; the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.	Gilman's Marine Interna- tional Law.
		4	SPECIAL INSTRUCTION: General description of the human body and its functions, the arrest of hemorrhage, resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction, Fridays, 7.30 to 9.30 p. m., additional.)	Martin's The Human Body and the Effects of Nec- roticism.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship, Naval Construction, and Naval Tactics.	2	4	NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.	White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture. Welch's Text-book of Naval Architecture. Special Notes and Drawings.
Steam Engineering.	3	4	MARINE ENGINES: General description of modern marine engines and their dependencies; expansion of steam; piston speed and size of cylinders; uses and construction of parts of a marine engine; calculations on twisting and bending moments; principles and construction of condensers and pumps; types of valves and valve gear, and valve diagrams; principles and construction of various types of propellers; the indicator and its diagrams; power of an engine and calculations relating thereto; lectures on the metallurgy of iron and steel; the production of bronzes and alloys with reference to their use in marine engineering. Objects of test trials; boiler trials and their results; friction of the engine, and the dynamometer; standard methods and examples of engine trials.	Seaton's Marine Engineering. Thurston's Engine and Boiler Trials.
	2	4	BOILERS: Various types and efficiency of steam boilers; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers; fuels, solid and liquid; combustion of, with the methods of their application under natural and forced draught, their comparative qualities and properties, with instructions as to their selection for, and care of, as steam fuels; practical tests of the calorific value of fuels.	Wilson's Steam Boilers. Shock's Steam Boilers.*

PROGRAMME OF RECITATIONS.

FIRST TERM.

Department	Fourth class	Third class	Second class	First class, naval division	First class, engineer division
Astronomy, Navigation, and Surveying				M. W. F. R. (1)	
English Studies, History, and Law	M. T. W. Th. F. (2)	M. F. R. (1), T. (1)			
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. W. Th. F. (1)	T. (1), M. (1)		
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2)	
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (2) to 9:30 p.m.		
Trigonometry and Geometry				T. Th. (2), F. (3)	
Physics and Chemistry			T. W. Th. F. (2)	M. T. Th. (1)	
Seamanship, Naval Construction, and Naval Tactics			M. (1)	T. W. Th. (3)	T. W. (3)
Steam Engineering			W. Th. F. (1)		(W. F. R. (1), T. Th. (2), M. Th. F. (3))

SECOND TERM.

Astronomy, Navigation, and Surveying			W. F. (1)	M. T. Th. F. (1)	
English Studies, History, and Law	M. T. W. Th. F. (3)			W. (1), F. (2)	
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. (1), T. F. (1), R. (1)†			
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		T. Th. F. (2)
Modern Languages	M. T. W. Th. F. (2), R. (1)†	W. Th. (2)	M. (1), F. (1) to 9:30 p.m.		
Trigonometry and Geometry				M. T. W. Th. (2), F. (3)	
Physics and Chemistry		(M. (1), T. W. Th. F. (1), F. (1) to 9:30 p.m.)	M. T. Th. F. (2)		
Seamanship, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			M. T. Th. (1)		(M. T. W. Th. F. (1), M. W. (2), T. F. (3))

Special Lectures in Physics and Hygiene

with 1917-18 programme as 1917-18 to 9:30 p.m.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics-----					1	1	3	4	2	3
Ordnance and Gunnery-----							3	5		
Astronomy, Navigation, and Surveying-----						2	4	4		
Steam Engineering-----					3	3			8	9
Mechanics and Applied Mathematics-----					5	5	3		3	3
Physics and Chemistry-----				5 F	4	4	3		3	
Mathematics-----	6	5	5	5						
English Studies, History, and Law-----	5	5	4					2		
Modern Languages-----	5	5½	3	2	1 F	½ F				
Mechanical Drawing-----			4	3½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics-----		½ F		½ F
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F Friday 7:30 to 9:30 a. m.

PROGRAMME OF RECITATIONS.

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COURSE OF INSTRUCTION.

FIRST TERM.

Departments.	Fourth class	Third class	Second class	First class, line division	First class, engineer division
Astronomy, Navigation, and Surveying				M. (1), W. F. S. (1)	
English Studies, History and Law	M. T. W. Th. F. (2)	M. F. S. (1), T. (1)			
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. W. Th. F. (1)	T. (3), S. (1)		
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Modern Languages	M. T. W. Th. F. (1)	T. W. Th. (1)	M. (2), F. (2) to 9.30 p.m.*		
Ordnance and Gunnery				T. Th. (2), F. (3)	
Physics and Chemistry			T. W. Th. F. (2)	M. T. Th. (1)	M. T. Th. (1)
Seamanship, Naval Construction, and Naval Tactics			M. (1)	T. W. Th. (3)	T. W. (3)
Steam Engineering			W. Th. F. (1)		(W. F. S. (1), T. Th. (2), M. Th. F. (3).

SECOND TERM.

Astronomy, Navigation, and Surveying			W. F. (1)		M. T. Th. F. (1)
English Studies, History, and Law	M. T. W. Th. F. (3)				W. (1), F. (2)
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. (1), T. F. (3), S. (1)†			
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		T. Th. F. (2)
Modern Languages	M. T. W. Th. F. (2), S. (1)†	W. Th. (2)	S. (1), F. (2) to 9.30 p.m.)*		
Ordnance and Gunnery				M. T. W. Th. (2), F. (3)	
Physics and Chemistry		M. (2), T. W. Th. F. (1), } F. (7.30 to 9.30 p.m.)*	M. T. Th. F. (2)		
Seamanship, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			M. T. Th. (3)		M. T. W. Th. F. (1), M. W. (2), T. F. (3).

Special Instruction in Physiology and Hygiene					(1)† F. (7.30 to 9.30 p.m.)* = (1)† F. (7.30 to 9.30 p.m.)*
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* Lectures and practical instruction

† Saturday period, second term, from January 1 to March 10

TABLE OF CO-EFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline ----- <i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	8	12	16	16	160	160		
Seamanship, Ship Building, and Naval Tactics ----- Cruise Reports, Navigation Note Books, Journals, and Station Bills -----			3	13	8		44	56	32
Practice Cruise ----- <i>Ordnance and Gunnery.</i>				2		72		24	36
Ordnance Instructions, Infantry Tactics, and Gunnery ----- Ordnance and Gunnery -----				*15		60		44	
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying ----- Practice Cruise -----			3	12			12	44	
<i>Steam Engineering.</i>				2		68			
Steam Machinery, Marine Engines, and Boilers ----- Summer Practical Work -----			8		5	44		20	
Marine Engines ----- Designing Machinery -----			3		10				88
Boilers ----- <i>Mechanics and Applied Mathematics.</i>					12		184		56
Differential and Integral Calculus, and Mechanics ----- Least Squares and Strength of Materials -----			12	5	5	68			
<i>Physics and Chemistry</i>					5		88		
Chemistry and Physics ----- Physics -----		5	10	5	5	80	80		
<i>Mathematics.</i>									
Algebra and Geometry ----- Trigonometry, Analytical Geometry, and Descriptive Geometry -----	5						60	60	
<i>English Studies, History, and Law.</i>		10							
English and History ----- English and Law -----	5						36		
International Law ----- <i>Modern Languages.</i>		4		4		52		24	
French, Spanish, and German ----- <i>Mechanical Drawing.</i>	5	5	8			52	62	28	28
Mechanical Drawing ----- <i>Miscellaneous.</i>		6	3			36	36		
Special Instruction (Physiology and Hygiene) -----				2	2	8	8		
Maxima for each class -----	76	152	228	304	304	760	760	240	240

* In making up the standing for a year the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling. Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

Setting up drill; school of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, boat howitzers, and machine guns; target practice with small-arms; target practice afloat with machine guns, rifled howitzers, Hotchkiss rapid-fire guns, and great guns; small-sword exercise; broad-sword exercise; bayonet exercise; cane exercise; handling and firing torpedoes; handling and preparing fuzes for use; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the draft; the preparation and inspection of ordnance material.

Two gold medals are awarded annually for marksmanship; one to the cadet of the first class who excels in great-gun practice, and one to the cadet of the second class who excels in practice with the service rifle and revolver.

In June, 1891, the great-gun medal was awarded to Cadet Richard M. Watt, of Pennsylvania. The practice was from the steamer *Standish*, at ranges varying from 1,100 yards to 1,500 yards, with the Hotchkiss 3-pounder and 6-pounder rapid-fire guns. The best scores were:

	Score.	Percent of maximum
Cadet Watt	120	100
Cadet Lane	120	100

*Cadet Watt won in shooting off the tie by a score of 40 to 42 made by Cadet Lane out of a possible 60.

The scoring was on the service vertical target.

In December, 1891, the small-arms medal was awarded to Cadet Upham, of Montana. The targets used were the Army A and B for the Hotchkiss rifle, and a rectangle 18 by 24 inches for the revolver. The score was as follows:

	Distance	Percent of maximum
On shore, A target	170	100
From boat, B target	320	100
Revolver, 18 by 24 inch target	30	100

PRACTICAL INSTRUCTION OF CADETS.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Navigation : Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying, and constructing a chart of, a portion of the Severn River.

Compass Deviations : Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Vise-bench work; forging; boiler making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
October ----	1	Company (4). Monitor (1).	Company (4). Monitor (1).	Target great guns (4). Monitor (1).	Steam tactics (4). Monitor (1).
	2	Battery (4). Monitor (1).	Battery (4). Monitor (1).	Steam tactics (4). Monitor (1).	Target great guns (4). Monitor (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns (4). Monitor (1).	Steam tactics (4). Monitor (1).	Company (4). Monitor (1).	Company (4). Monitor (1).
November ----	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam tactics (4). Monitor (1).	Target great guns (4). Monitor (1).	Battery (4). Monitor (1).	Battery (4). Monitor (1).
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December* ----	1	Broadsword.	Steam.	Broadsword.	Steam.
	2	Steam.	Broadsword.	Steam.	Broadsword.
	3	Broadsword.	Steam.	Broadsword.	Steam.
	4				
January* ----	1	Steam.	Broadsword.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
SEMI-ANNUAL EXAMINATION.					
February* ----	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
March ----	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Deviation compass (4). Seamanship (1).	Deviation compass (4). Seamanship (1).	Deviation compass (4). Seamanship (1).	Deviation compass (4). Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	General quarters.	General quarters.	General quarters.	General quarters.
April ----	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4). General quarters (1).	Skirmish (4). General quarters (1).	Steam tactics (4). General quarters (1).	Torpedoes (4). General quarters (1).
	3	Skirmish (4). Seamanship (1).	Target great guns (4). Seamanship (1).	Torpedoes (4). Seamanship (1).	Steam tactics (4). Seamanship (1).
	4	Steam tactics (4). Seamanship (1).	Torpedoes (4). Seamanship (1).	Target great guns (4). Seamanship (1).	Skirmish (4). Seamanship (1).
May ----	1	Torpedoes (4). General quarters (1).	Steam tactics (4). General quarters (1).	Skirmish (4). General quarters (1).	Target great guns (4). General quarters (1).
	2	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
	3	Battalion artillery (3). Seamanship (1).	Battalion artillery (3). Seamanship (1).	Battalion artillery (3). Seamanship (1).	Battalion artillery (3). Seamanship (1).
	4	Steam tactics (3). General quarters (3).	Steam tactics (3). General quarters (3).	Steam tactics (3). General quarters (3).	Steam tactics (3). General quarters (3).
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
ANNUAL EXAMINATION.					
June 1 to 10					
June 10 to 15					
August 1 to 10					
Practice cruise.					

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion infantry, in place of the ordinary detail drills.

SECOND CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
October ----	1	Company.	Company.	Target machine guns.	Steam launches.
	2	Battery.	Battery.	Steam launches.	Target machine guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
November -	4	Target machine guns.	Steam launches.	Company.	Company.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Target machine guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December*.	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
January *--	4				
	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Signals.	Steam.
	3	Steam.	Broadsword.	Steam.	Signals.
	4	Signals.	Steam.	Broadsword.	Steam.
SEMI-ANNUAL EXAMINATION.					
February *	1	Steam.	Signals.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
March -----	4	Practical ordnance.	Steam.	Small sword.	Steam.
	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April -----	4	General quarters.	General quarters.	General quarters.	General quarters.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Small sword (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Skirmish (4).	Target great guns (4).	Small sword (4).	Steam tactics (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Steam tactics (4).	Small sword (4).	Target great guns (4).	Skirmish (4).
May -----		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	1	Small sword (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
		Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	4	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
		General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	5				
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Small sword.	Small sword.	Small sword.	Small sword.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10	ANNUAL EXAMINATION.				

*During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion infantry, in place of the schedule detail drills.

SECOND CLASS.

Summer months.	Week.	First division.	Second division.	Third division.	Fourth division.
	1	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers, -
	2	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.
	3	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.
	4	Running steam cut- ters a. m. Howitzers afloat p. m.	Running steam cut- ters a. m. Signals p. m.	Running steam cut- ters a. m. Target howitzers p. m.	Running steam - ters a. m. Target machine g- p. m.
	5	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.
	6	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.
	7	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.
	8	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms m.
	9	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns m.
	10	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.

THIRD CLASS.

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
October ----	1	Company.	Company.	Boats.	Boats.
	2	Battery.	Battery.	Boats.	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
November -	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December*	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
January *--	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Pivot guns.
	4	Pivot guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
February *	1	Target small arms.	Pivot guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
March ----	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April ----	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target small arms (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target small arms (4).	Boats (4).	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
	7	Seamanship.	Boats (4).	Target small arms (4).	Seamanship (1).
May -----	1	Boats (4).	Seamanship (1).	Skirmish (4).	Target small arms (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
	8	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	9	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	10	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	11	General quarters.	General quarters.	General quarters.	General quarters.
	12	Boats.	Boats.	Boats.	Boats.
	13	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	15				
	16				
	17				
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	20				
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	25				
	26				
	27				
	28				
	29				
	30				
	31				
June 1 to 10		ANNUAL EXAMINATION.			
June 10 to August 28.		Practice cruise.			

*During the months of December, January, and February, two (2) Saturday drill periods are devoted to battalion infantry in place of the schedule detail drills.

FOURTH CLASS.

Academic Month.	Weeks.	First division.	Second division.	Third division.	Fourth division.
October....	1	Company.	Company.	Boats.	Boats.
	2	Battery.	Battery.	Boats.	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
November ..	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December*..	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Pivot guns.	Rigging loft.	Dancing.	Gymnastics.
	4				
January*..	1	Gymnastics.	Pivot guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Pivot guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
SEMI-ANNUAL EXAMINATION.					
February *	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Dancing.
	4	Dancing.	Rigging loft.	Dancing.	Gymnastics.
March	1	Gymnastics.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Gymnastics (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May	1	Skirmish (4).	Gymnastics (4).	Boats (4).	Seamanship.
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
	3	Seamanship.	Boats (4).	Gymnastics (4).	Seamanship (1).
	4	Boats (4).	Seamanship (1).	Seamanship (1).	Gymnastics (4).
	1	General quarters (1).	General quarters (1).	General quarters (1).	General quarters.
	2	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry.
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery.
	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	General quarters (3).	General quarters (3).	General quarters (3).	General quarters.
	4				
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
ANNUAL EXAMINATION.					
June 1 to 10.					
June 10 to August 20.	Practice cruise.				
Sept	1	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	2	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	3	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	4	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
	1	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	2	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	3	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
	4	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion infantry in place of the schedule drill.
† Swimming daily.

SUMMARY OF PRACTICAL INSTRUCTION.

PRACTICAL INSTRUCTION.

95

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				During month of September, fourth class.	Total number of instructions, exclusive of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging <i>Enterprize</i> -----	33	30	37	35	135	(*)	-----	(*)	(*)	-----	135
Rigging loft -----	-----	-----	15	15	30	-----	-----	-----	-----	-----	30
Boats under oars, or sail -----	-----	-----	15	15	30	(*)	15	(*)	(*)	-----	45
Naval tactics with steam launches -----	12	4	-----	-----	16	-----	5	-----	-----	-----	21
Navy signals, day -----	-----	5	-----	-----	5	(*)	3	-----	-----	-----	8
Navy signals, night -----	-----	-----	-----	-----	-----	(*)	3	-----	-----	-----	3
Army signals, day -----	-----	5	5	-----	10	-----	2	-----	-----	-----	12
Army signals, night -----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	2
Monitor, with great gun practice -----	4	-----	-----	-----	4	-----	-----	-----	-----	-----	4
General quarters -----	7	7	7	7	28	(*)	-----	(*)	(*)	-----	28
General quarters, with target practice -----	4	4	4	4	16	(*)	-----	(*)	(*)	-----	16
Target practice, great guns -----	8	4	-----	-----	12	-----	5	-----	-----	-----	17
Pivot guns -----	-----	-----	5	5	10	-----	-----	-----	-----	-----	10
Broadside guns -----	-----	-----	5	5	10	(*)	-----	(*)	(*)	-----	10
Torpedoes -----	4	-----	-----	-----	4	-----	-----	-----	-----	-----	4
Practical ordnance -----	5	5	-----	-----	10	-----	-----	-----	-----	-----	10
Howitzers afloat -----	-----	-----	-----	-----	-----	-----	5	-----	-----	-----	5
Target practice, howitzers -----	-----	-----	-----	-----	-----	-----	5	-----	-----	-----	5
School of section -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	10	10
School of battery -----	4	5	5	5	19	-----	-----	-----	-----	-----	19
School of battalion artillery -----	9	9	9	9	36	-----	-----	-----	-----	-----	36
Target practice, machine guns -----	-----	5	-----	-----	5	-----	5	-----	-----	-----	10
Target practice, small-arms -----	-----	-----	9	-----	9	-----	5	-----	-----	-----	14
Target practice, pistols -----	-----	-----	5	-----	5	-----	-----	-----	-----	-----	5
School of the soldier -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	24	24
School of the company -----	4	5	9	9	27	-----	-----	-----	-----	-----	27

* Practice cruise.

ANNUAL REGISTER
OF THE
UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FIFTIETH ACADEMIC YEAR.

1894-'95.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1894.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Uphur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities for training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was removed back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1870, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1889.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanism, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 21, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps: And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do not receive such appointment shall be given a certificate of

graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress, approved March 2, 1889, provides that "the academic board of the naval academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the naval academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

Assumed command:

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Uphur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.
June 30, 1890.—Captain R. L. Phythian.

BOARD OF VISITORS, JUNE, 1894.

Gen. SCOTT SHIPP, Lexington, Va., *President*.

Hon. CHARLES S. RANDALL, U. S. House of Representatives, *Vice-President*.

Hon. J. R. MCPHERSON U. S. Senate.

Hon. GEORGE C. PERKINS U. S. Senate.

Hon. ADOLPH MEYER..... House of Representatives.

Hon. JOSEPH H. OUTHWAITE House of Representatives.

Mr. S. P. LANGLEY Washington, D. C.

Mr. CHARLES H. WILLCOX..... Atlanta, Ga.

The Venerable C. J. BRADY..... Archdeacon of Kansas.

Mr. JOHN C. PEGRAM Providence, R. I.

Gen. LEW. WALLACE Crawfordsville, Ind.

Mr. JOHN K. COWAN Baltimore, Md.

ACADEMIC CALENDAR.

1894-1895.

1894.

October 1.—Beginning of first term Monday.

1895.

January 26—February 2.—Semi-annual examination . . . Monday-Saturday.

February 2.—End of first term Saturday.

May 15.—Examination of candidates for admission as naval
cadets Wednesday.

May 31.—End of academic year, 1894-'95 Friday.

June 3-8.—Annual examination Monday-Saturday.

September 2.—Examination of candidates for admission as Naval
cadets Monday.

October 1.—Beginning of first term, 1895-'96 Tuesday.

The academic months end on the following days:

1894-1895.

October . . .	October 27	February . . .	March 2
November . . .	November 24	March . . .	March 30
December . . .	December 22	April . . .	April 27
January . . .	January 26	May . . .	May 25

1895-1896.

October . . .	October 26	December . . .	December 21
November . . .	November 23	January . . .	January 26

CALENDAR FOR 1894-'95.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
						1		1	2	3	4	5	6
2	3	4	5	6	7	8	7	8	9	10	11	12	13
9	10	11	12	13	14	15	14	15	16	17	18	19	20
16	17	18	19	20	21	22	21	22	23	24	25	26	27
23	24	25	26	27	28	29	28	29	30				
30													
OCTOBER.							MAY.						
	1	2	3	4	5	6				1	2	3	4
7	8	9	10	11	12	13	5	6	7	8	9	10	11
14	15	16	17	18	19	20	12	13	14	15	16	17	18
21	22	23	24	25	26	27	19	20	21	22	23	24	25
28	29	30	31				26	27	28	29	30	31	
NOVEMBER.							JUNE.						
				1	2	3							1
4	5	6	7	8	9	10	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22
25	26	27	28	29	30		23	24	25	26	27	28	29
							30						
DECEMBER.							JULY.						
						1		1	2	3	4	5	6
2	3	4	5	6	7	8	7	8	9	10	11	12	13
9	10	11	12	13	14	15	14	15	16	17	18	19	20
16	17	18	19	20	21	22	21	22	23	24	25	26	27
23	24	25	26	27	28	29	28	29	30	31			
30	31												
JANUARY.							AUGUST.						
		1	2	3	4	5				1	2	3	
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30	31			25	26	27	28	29	30	31
FEBRUARY.							SEPTEMBER.						
					1	2	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	11	12	13	14
10	11	12	13	14	15	16	15	16	17	18	19	20	21
17	18	19	20	21	22	23	22	23	24	25	26	27	28
24	25	26	27	28			29	30					
MARCH.							OCTOBER.						
					1	2			1	2	3	4	5
3	4	5	6	7	8	9	6	7	8	9	10	11	12
10	11	12	13	14	15	16	13	14	15	16	17	18	19
17	18	19	20	21	22	23	20	21	22	23	24	25	26
24	25	26	27	28	29	30	27	28	29	30	31		
31													

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Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT-COMMANDER W. T. SWINBURNE.

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LIEUTENANT-COMMANDER A. ROSS.

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LIEUTENANT HUGO OSTERHAUS, *Assistant and Drill Officer.*

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 PAY DIRECTOR W. GOLDBOROUGH, *Commissary and General Storekeeper.*
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 J. M. SPENCER, *Assistant Librarian.*
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BOATSWAIN J. S. SINCLAIR.

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 THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.
 THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.
 THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.
 THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.
 THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.
 THE HEAD OF THE DEPARTMENT OF MATHEMATICS.
 THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.
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 THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

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H. V. BUTLER, JR.

CADET LIEUTENANT AND ADJUTANT,

W. H. STANDLEY.

CADET LIEUTENANT AND COMMISSARY,

F. H. BRUMBY.

CADET PASSED ASSISTANT ENGINEER,

T. M. DICK.

CADET ENSIGNS (SENIOR),

H. LANING,
A. T. CHESTER,

W. R. GHERARDI,
J. J. RABY.

CADET ENSIGNS (JUNIOR),

S. C. VESTAL,
M. J. MCCORMACK,

W. C. DAVIDSON,
A. J. WADHAMS.

CADET PETTY OFFICERS OF THE FIRST CLASS.

CADET CHIEF PETTY OFFICER,

W. BAGLEY.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
D. W. TODD, R. Z. JOHNSTON, JR., S. P. DENNETT, N. H. HALL.	W. B. IZARD, J. C. BECKINRIDGE, J. E. WALKER, J. D. SAYERS, JR.	W. R. CUSHMAN, K. M. BENNETT, O. S. KNEPPER, G. H. MANN.	J. R. MONAGHAN, E. H. WATSON, C. B. BARNES, M. TAKASAKI.

CADET PETTY OFFICERS OF THE SECOND CLASS.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
R. H. ROBINSON, G. S. LINCOLN, H. S. KIMBALL, D. W. WURTSBAUGH.	C. L. POOR, R. EABLE, T. A. KEARNEY, A. W. MARSHALL.	C. L. LEIPER, A. E. KALBACH, C. E. GILPIN, E. MCCAULEY, JR.	J. H. HOLDEN, T. T. CRAVEN, L. C. PALMER, J. H. JONES.

SUMMER CRUISE, 1894.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP MONONGAHELA.

June 9 to August 30.

COMMANDER C. M. CHESTER, <i>Commanding.</i>	ENSIGN H. F. BRYAN, <i>Instructor in Navigation.</i>
LIEUTENANT H. OSTERHAUS, <i>Executive Officer.</i>	ENSIGN S. R. HURLBUT, <i>Watch Officer.</i>
LIEUTENANT A. M. KNIGHT, <i>Navigator.</i>	SURGEON G. E. H. HARMON.
LIEUTENANT R. M. DOYLE, <i>Watch Officer.</i>	ASSISTANT SURGEON M. W. BARNUM.
LIEUTENANT J. H. GLENNON, <i>Watch Officer.</i>	PAYMASTER J. A. RING.
LIEUTENANT J. H. SHIPLEY,* <i>Watch Officer.</i>	CHAPLAIN H. H. CLARK.
ENSIGN W. A. EDGAR, <i>Watch Officer.</i>	

* Detached July 21,

NAVAL CADETS.

First Class—Line Division.

Bagley,	Chester,	Klemann,	Smith, R. F. (a)
Baldwin,	Cushman,	Knepper,	Standley,
Bannon,	Davidson, (b)	Lanig, (b)	Takasaki,
Barnes,	Dennett,	McCormack,	Todd, (c)
Bennett,	Gherardi,	Mann,	Vestal,
Breckinridge,	Groenbeck,	Monaghan,	Wadhama,
Brumby, (b)	Izard,	Raby,	Walker, J. E.,
Butler,	Johnston, R. Z.,	Sayera,	Watson, (d)

Second Class—July 17 to August 3

Bisset,	Gilpin,	Kearney,	Palmer,
Burt,	Hauenstein,	Kimball,	Ridgely,
Cooke, (e)	Henry,	Leiper,	Roya,
Crenshaw,	Holden,	Littlefield, (e)	Walker, R. E.,
Dock,	Jessop,	MacArthur,	Washington,
Fitzgerald,	Kalbach,	McCauley,	Wood,

August 3 to August 27.

Blandy,	Farle,	Marshall, A. W., (f)	Tozer,
Brouson,	Ellis,	Middleton,	Volkmar, (e)
Cluverius,	Jones, J. H.,	Mustin,	Wettengel,
Craven,	Knox, (A)	Poor,	Wurtsbaugh,
Curtis,	Lincoln,	Rice,	
Deane,	McConnell,	Robinson,	

Third Class.

Anding,	Hepburn,	Mahony,	Sargent,
Asserson,	Herdon,	Mayo,	Sexton,
Bagby,	Hilleary,	Miller,	Sheffield,
Boyd,	Holman,	Morse,	Shelton,
Bryant,	Hoopee,	Murfin,	Smith, A. St. C.,
Chase,	Houston,	Naylor,	Sykes,
Collins,	Jeffers,	Oglesby,	Terry,
Day,	Jenson,	Overstreet,	Thelen,
DuBois,	Jones, N. L.,	Owen, A. C.,	Van Orden,
Duncan,	Kautz,	Owens, C. T.,	Ward,
Eggert,	Kernan,	Pattison,	Webber,
Falconer,	Kempff,	Perrill,	Wells, H. T.,
Giles,	Landis,	Powell,	Wessels,
Graeme,	Leahy,	Pratt,	White,
Graham,	McCarthy,	Preasey,	Williams, H.,
Green, (i)	McDowell,	Reynolds,	Yarnell,
Hart,	McMullen,	Richardson,	
Henderson,	Magill,	Roehle,	

Fourth Class.

Applewhite,	Klaon,	Johnson, T. L.,	Tardy,
Arnold,	Graham, J. B.,	Lebsfeldt,	Thorpe, (h)
Brockway,	Palk,	Marble,	Webber, C. H.,
Brown, M. H.,	Fuller,	Morris,	Wells, W. H.,
Brynum,	Gilmer,	Nelson,	Wilcox,
Conston,	Haarahan,	Peterson,	Woods, E.,
Dinger,	Hord,	Rutledge,	
Kiebrin,	Hunter,	Shuckley,	

a Granted sick leave from August 19.

b Granted sick leave from August 26.

c Transferred to naval hospital, Norfolk, Va., August 2.

d Sent to hospital at Newport, R. I., August 1.

e Granted permission to return to Academy, August 20, to prepare for re-examination.

f Granted leave from August 20.

g Granted leave from August 18.

h Granted leave from August 6.

i Transferred to naval hospital, Norfolk, Va., August 7.

SYNOPSIS OF THE CRUISE, 1894.

MONONGAHELA.

Cadets, first class, line division, and the third and fourth classes embarked June 9.

Sailed from Annapolis, June 11.

Sailed from Lynnhaven Bay for three weeks' cruise at sea, June 16.

Returned to Fortress Monroe, July 7.

On arrival of *Bancroft*, July 10, transferred 16 members of the first class, line division, to her, and received 24 members of the second class.

Put to sea, July 12, cruising off the capes of the Chesapeake.

Returned to Fortress Monroe, August 3, met *Bancroft*, and exchanged the remaining half of the first and second classes for those who joined her July 10.

Put to sea on August 7.

Returned to Hampton Roads, August 18.

Anchored off South River, Md., August 24.

Arrived at Annapolis, August 30.

BANCROFT.

Cadets, first class, engineer division, and the second class embarked July 7.

Sailed from Annapolis, July 9. Hampton Roads, same day.

Met *Monongahela*; exchanged part of second class for half of first class, line division. Norfolk navy-yard, July 10. Philadelphia, July 14. Sailed July 19. Navy-yard, New York, July 21.

Sailed July 26; arrived at Newport torpedo station same day. Hampton Roads, August 3;

exchanged cadets with *Monongahela*. Norfolk navy-yard, August 7. Philadelphia, August 10.

New York navy-yard, August 17. Hampton Roads August 24. Annapolis, August 30.

UNITED STATES PRACTICE SHIP BANCROFT.

[July 7 to August 30.]

LIEUTENANT-COMMANDER R. R. INGERSOLL, *Commanding*.

LIEUTENANT S. C. PAINE, *Executive Officer*.

SURGEON H. F. BEYER.

LIEUTENANT M. L. WOOD, *Navigator*.

PASSED ASSISTANT ENGINEER W. F. WORTHINGTON.

ENSIGN W. H. G. BULLARD, *Instructor*.

ASSISTANT ENGINEER H. W. JONES.

NAVAL CADETS.

First Class—Line Division.

July 10 to August 3.

August 3 to August 30.

Bennett,
Breckinridge,
Brumby,
Cushman,
Davidson,
Klemann,
Knepper,
Laning,

McCormack,
Mann,
Raby,
Smith, S. F.,
Standley,
Vestal,
Walker, J. E.

Bagley.
Baldwin,
Bannon,
Barnes,
Butler,
Chester,
Dennett,
Gherardi,

Groesbeck,
Izard,
Johnston, R. Z.,
Monaghan,
Sayers,
Takasaki,
Wadhams.

First Class—Engineer Division.

July 7 to August 30.

Dick,
Dunn,
Eckhardt,
Freeman,

Garrison,
Karna,
Mallory.

Mansfield,
Marshall, J. F., Jr.,
Merritt,

Morton,
Walker, C. H.,
Williams, H. C.

Second Class.

July 7 to August 3.		August 3 to August 27.	
Blandy,	McConnell,	Bisset,	Kearney,
Bronson,	Marshall, A. W.,	Burt,	Kimball,
Castleman, (a)	Middleton,	Cook,	Leiper,
Cluverina,	Mustin,	Crenshaw,	Littlefield,
Craven,	Poor,	Doak,	MacArthur,
Curtin,	Rice,	Fitzgerald,	McCauley,
Deane,	Robinson,	Gilpin,	Palmer,
Earle,	Tausaig, (b)	Hauenstein,	Ridgely,
Ellis,	Toner,	Henry,	Roy,
Jones, J. H.,	Volkmar,	Holden,	Walker R. E.,
Knox,	Wettengel,	Jessup,	Washington,
Lincoln,	Wurtsbaugh	Kalbach,	Wool

PRACTICAL INSTRUCTION AT NAVAL ACADEMY.

WORK IN MACHINE SHOP FROM JUNE 11 TO JULY 7.

Naval cadets of first class, engineer division.	:
Naval cadets of second class	6

SUMMARY.

On board practice ships <i>Monongahela</i> and <i>Bancroft</i> ..	15
Absent on sick leave .....	.
Total	15

a Transferred to naval hospital, New York, July 23
b Died July 23, navy yard, New York

CLASSES OF THE NAVAL CADETS

AT THE BEGINNING OF THE ACADEMIC YEAR, 1894-'95.

[Corrected to October 4, 1894.]

Naval cadets of the class appointed in 1889, performing required service afloat—Line Division—35 members.

Order of gen- eral merit.	Name.	State from which appointed.	Date of admission.
*1	Powelson, Wilfrid Van Nest	New York.....	Sept. 5, 1889
*2	Montgomery, William Slack.....	Kentucky	Sept. 5, 1889
*3	Elder, Edwin Avery.....	Massachusetts.....	May 21, 1889
4	Clark, Frank Hodges, jr.....	Rhode Island.....	Sept. 5, 1889
5	Ward, Henry Heber.....	New Jersey.....	Sept. 7, 1889
6	Perry, Joseph Albert.....	Illinois	Sept. 6, 1889
7	Bisset, Eugene Leo.....	Kentucky	Oct. 2, 1889
8	Crosley, Walter Selwyn.....	Connecticut	Sept. 9, 1889
9	Lang, Charles Jonas.....	Pennsylvania.....	Sept. 6, 1889
10	Campbell, Edward Hale.....	Indiana.....	Sept. 6, 1889
11	Magill, Louis John.....	Pennsylvania.....	Nov. 11, 1889
12	Berry, David Mark.....	California	Sept. 6, 1889
13	Wilson, Thomas Sheldon.....	Illinois	May 20, 1889
14	Doddridge, John Schon.....	West Virginia.....	Sept. 7, 1889
15	Pearson, Henry Allen.....	Utah	Sept. 6, 1889
16	Gise, William Kern.....	Illinois	June 14, 1889
17	Cook, Allen Merriam.....	Kansas	May 22, 1889
18	Chadwick, Frank Laird.....	Minnesota.....	May 18, 1889
19	Fewel, Christopher Catron.....	Texas	Oct. 2, 1889
20	Olmsted, Percy Napier.....	Oregon	May 21, 1889
21	Jackson, Orton Porter.....	Pennsylvania.....	May 18, 1889
22	Powell, William Glasgow.....	New Jersey.....	May 18, 1889
23	Douglas, Richard Spencer.....	Georgia.....	June 3, 1889
24	Upham, Frank Brooks.....	Montana.....	Sept. 6, 1889
25	Sticht, John Low.....	New York	Sept. 7, 1889
26	Ryan, John Paul Joseph.....	New York	May 22, 1889
27	Morris, John Ramsay	Missouri.....	Sept. 7, 1889
28	Wells, Chester.....	Pennsylvania.....	Nov. 15, 1889
29	Holsinger, Gerald Long.....	Kansas	Oct. 3, 1889
30	McKethan, Alfred Augustus	North Carolina	Sept. 5, 1889
31	Pollock, Emmett Biddle.....	Illinois	May 18, 1888
32	Potter, James Boyd.....	New Jersey	Sept. 5, 1889
33	Pratt, Alfred Allen	Illinois	Sept. 7, 1889
34	Carver, Marvin	Minnesota	Sept. 27, 1889
35	Procter, André Morton	Kentucky	Sept. 6, 1889

Engineer Division—6 members.

*1	Nutting, Daniel Chaplin, jr.....	Kansas	May 21, 1889
2	Peugnet, Maurice Berthold	Missouri.....	Sept. 7, 1889
3	Price, Henry Bertrand.....	Iowa	May 20, 1889
4	Trench, Martin Edward	Minnesota.....	Oct. 3, 1889
5	Brady, John Richard.....	Pennsylvania.....	Sept. 6, 1889
6	Read, Frank De Witt.....	Ohio	Sept. 6, 1889

*Naval Cadets of the class appointed in 1890, performing required service afloat—110
Division—34 members.*

Order of gen- eral merit.	Name.	State from which appointed.	Date of admission.
*1	Robert, William Pierre.....	Mississippi.....	May 21 '90
*2	Cox, Daniel Hargate.....	New York.....	Sept. 9 '90
*3	Gillis, Irvin Van Gorder.....	New York.....	Sept. 6 '90
*4	Roberts, Thomas Gaines.....	Alabama.....	May 21 '90
*5	Sellers, David Foote.....	New Mexico.....	May 21 '90
*6	Adams, Lawrence Stowell.....	Pennsylvania.....	Sept. 28 '90
7	Stone, Raymond.....	Alabama.....	Sept. 5 '90
8	Tompkins, John Thomas.....	Louisiana.....	Sept. 6 '90
9	McLean, Ridley.....	Tennessee.....	May 20 '90
10	Webster, Charles.....	Massachusetts.....	Sept. 6 '90
11	Babin, Provost.....	New York.....	Sept. 6 '90
12	Churchill, Winston.....	Missouri.....	May 21 '90
13	Jones, Lewis Burton.....	New York.....	May 21 '90
14	Fullinwider, Simon Peter.....	Missouri.....	May 21 '90
15	Graham, Stephen Victor.....	Michigan.....	May 19 '90
16	Bennett, Ernest Linwood.....	Massachusetts.....	Sept. 24 '90
17	Luby, John McClane.....	Texas.....	Sept. 9 '90
18	Sandoz, Fritz Louis.....	Louisiana.....	May 19 '90
19	Galbraith, Gilbert Smith.....	Pennsylvania.....	Sept. 6 '90
20	Shaw, Melville Jones.....	Minnesota.....	Sept. 6 '90
21	Kavanagh, Arthur Glynn.....	Nebraska.....	May 20 '90
22	Bookwalter, Charles Sumner.....	Illinois.....	Sept. 9 '90
23	Scott, William Pitt.....	Pennsylvania.....	May 20 '90
24	Snow, Carlton Farwell.....	Maine.....	May 10 '90
25	Osborn, Robert Hatfield.....	New York.....	May 21 '90
26	Spear, Roscoe.....	Pennsylvania.....	May 21 '90
27	Manion, Walter James.....	Louisiana.....	Sept. 6 '90
28	McNeely, Robert Whitehead.....	North Carolina.....	Sept. 9 '90
29	Turpin, Walter Stevens.....	Maryland.....	May 22 '90
30	Bulmer, Roscoe Carlyle.....	Nevada.....	Sept. 28 '90
31	Whitted, William Scott.....	North Carolina.....	May 21 '90
32	Stone, George Loring Porter.....	Georgia.....	Sept. 28 '90
33	Gelm, George Earl.....	New York.....	May 21 '90
34	England, Clarence.....	Arkansas.....	Sept. 2 '90

Engineer Division—11 members.

1	Hodgins, John Milton.....	Virginia.....	Sept. 9 '90
2	McMorris, rolling Kavanaugh.....	Alabama.....	Sept. 12 '90
3	Hinds, Alfred Walton.....	Alabama.....	Sept. 2 '90
4	Mundy, Roscoe Charles.....	Maine.....	Sept. 9 '90
5	Cooper, Ignatius Taylor.....	Delaware.....	May 20 '90
6	Baker, Henry Thomas.....	Ohio.....	Oct. 7 '90
7	Chappell, Ralph Hubert.....	Michigan.....	May 22 '90
8	James, Leland Frierson.....	South Carolina.....	Sept. 9 '90
9	Lyon, Frank.....	Kentucky.....	May 20 '90
10	Kerree, Joseph Mason.....	Illinois.....	Sept. 2 '90
11	Cone, Hutch Ingham.....	Florida.....	Sept. 2 '90
12	Winship, Emory.....	Georgia.....	June 1 '90
13	De Lany, Edwin Hayden.....	Tennessee.....	May 21 '90

Naval Cadets of the First Class—Line Division—33 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Bagley, Worth	North Carolina	Sept. 7, 1891	5	15
Baldwin, Frank Pardee	New Jersey	Sept. 8, 1891	5	15
Bannon, Philip Michael	Maryland	May 19, 1891	8	3
Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1891	5	2
Bennett, Kenneth Marratt	New Jersey	Sept. 8, 1891	5	15
Breckinridge, Joseph Cabell	Kentucky	Sept. 8, 1891	5	15
Brunby, Frank Hardeman	Georgia	Sept. 8, 1891	5	11
Butler, Henry Varnum, jr.	New York	Sept. 5, 1891	5	15
Chester, Arthur Tremaine	At large	May 19, 1890	5	25
Cushman, William Reynolds	New York	Sept. 5, 1891	5	15
Davidson, William Christopher	South Dakota	Sept. 28, 1891	5	11
Dennett, Stanley Pullen	Maine	Sept. 5, 1891	5	15
Gherardi, Walter Rockwell	At large	Sept. 4, 1891	5	15
Groesbeck, William Gerard	Ohio	Sept. 4, 1891	5	15
Hall, Newt Hamill	Texas	Sept. 7, 1891	2	22
Izard, Walter Blake	South Carolina	Sept. 7, 1891	5	15
Johnston, Rufus Zenas, jr.	North Carolina	Sept. 10, 1891	5	15
Klemann, John Valentine	New York	Sept. 10, 1891	5	15
Knepper, Orlo Smith	Pennsylvania	Sept. 4, 1891	5	15
Laning, Harris	Illinois	May 19, 1891	8	4
McCormack, Michael James	Michigan	Sept. 8, 1891	5	15
Mann, George Hiram	Pennsylvania	Sept. 6, 1890	7	13
Monaghan, John Robert	Washington	Sept. 7, 1891	5	15
Raby, James Joseph	Michigan	Sept. 9, 1891	5	15
Sayers, Joseph Draper, jr.	New York	Sept. 5, 1891	5	15
Smith, Stuart Farrar	Pennsylvania	Sept. 4, 1891	5	4
Standley, William Harry	California	Sept. 7, 1891	5	15
Takasaki, Motohiko	Empire of Japan	May 20, 1891	5	15
Todd, David Wooster	California	Sept. 8, 1891	4	18
Vestal, Samuel Curtis	Indiana	May 19, 1891	8	8
Wadhams, Albion James	New York	Sept. 4, 1891	5	15
Walker, James Erling	North Carolina	Sept. 7, 1891	5	15
Watson, Edward Howe	Kentucky	Sept. 7, 1891	4	15

Engineer Division—12 members.

Dick, Thomas Merritt	South Carolina	Sept. 5, 1891	4	17
Dunn, Edward Howard	Connecticut	Sept. 5, 1891	5	15
Eckhardt, Ernest Frederick	Wisconsin	Sept. 5, 1891	5	15
Freeman, Frederick Newton	Indiana	Sept. 9, 1891	4	17
Garrison, Daniel Mershon	New Jersey	June 1, 1891	7	8
Karns, Franklin D	Ohio	Sept. 30, 1891	4	17
Mallory, Charles King	Tennessee	Sept. 25, 1891	4	17
Mansfield, Newton	Ohio	Sept. 7, 1891	4	17
Marshall John Francis, jr	Texas	Sept. 8, 1891	4	17
Merritt Darwin Robert	Iowa	Sept. 10, 1891	4	17
Morton James Proctor	Missouri	Sept. 9, 1891	4	17
Walker Charles Henry	Massachusetts	Sept. 8, 1891	4	

Naval Cadets of the Second Class—67 members.

Name.	State from which appointed.	Date of admission.	Time served in previous ships	
			Months	Days
Bisset, Henry Overstreet	Maryland .. .	Sept. 6, 1892	4	.
Blandy, Edwin Chauncey	Pennsylvania	May 19, 1891	10	.
Bronson, Anson, jr.	Nebraska .. .	Sept. 20, 1892	4	..
Burt, Charles Perry	Georgia .. .	Sept. 6, 1892	4	.
Castleman, Kenneth Galleher	Kentucky .. .	Sept. 6, 1892	3	.
Cluverius, Wat Tyler, jr.	Louisiana	May 20, 1892	7	..
Cooke, Robert Powel Page	Virginia	Sept. 16, 1892	4	..
Craven, Thomas Tingey	New Hampshire	Sept. 19, 1892	4	.
Crenshaw, Arthur	Alabama .. .	Sept. 6, 1892	4	.
Curtin, Roland Irvin	Pennsylvania	Sept. 6, 1892	4	..
Deane, Russell Andrews	New York .. .	May 20, 1892	7	.
Donk, Henry Melville, jr.	Tennessee	Sept. 19, 1892	4	..
Earle, Ralph	Massachusetts	Sept. 6, 1892	4	..
Ellis, Mark Saint Clair	Arkansas	July 1, 1892	5	.
Fitzgerald, Edward Thomas	Texas	Sept. 13, 1892	4	..
Gilpin, Charles Edward	Michigan	Sept. 6, 1892	4	.
Hausenstein, George Jacob	Mississippi	Sept. 6, 1892	4	.
Henry, James Buchanan, jr.	New York .. .	Sept. 6, 1892	4	.
Holden, Jonas Hannibal	Vermont	May 20, 1892	7	..
Jessop, Earl Percy	West Virginia	Sept. 6, 1892	4	..
Jones Junius Henry	Virginia	Sept. 19, 1892	4	..
Kalbach, Andrew Edwin	Pennsylvania	July 1, 1892	5	..
Kearney, Thomas Albert	Missouri	Sept. 6, 1892	4	..
Kimball, Henry Swift	Massachusetts	Sept. 6, 1892	4	..
Knox, Dudley Wright	Tennessee	Sept. 6, 1892	4	.
Leiper, Charles Lewis	Pennsylvania	Sept. 6, 1892	4	..
Lincoln, Gatewood Sanders	Missouri	May 20, 1892	7	.
Littlefield, William Lord	Massachusetts	Sept. 20, 1892	4	..
MacArthur, Arthur, jr., jr.	Wisconsin	Sept. 6, 1892	4	..
McAuley, Edward, jr.	New York	Oct. 10, 1892	4	..
McConnell, Richard Gray	Pennsylvania	May 20, 1892	7	..
Marshall, Albert Ware	Texas	Sept. 6, 1892	4	..
Middleton, George Izard	South Carolina	Sept. 9, 1892	1	..
Mustin, Henry Croakey	Tennessee	Sept. 6, 1892	4	..
Palmer, Leigh Carlyle	Missouri	Sept. 6, 1892	4	..
Poor, Charles Longstreet	New York	Sept. 6, 1892	4	..
Rice, George Benjamin	Kentucky	Sept. 6, 1892	4	..
Ridgely, Frank Eugene	At large	Sept. 6, 1892	4	..
Robinson, Richard Hallett	Ohio	Sept. 6, 1892	4	..
Roy, John Holley	New York	Sept. 6, 1892	4	.
Toser, Charles Mason	New York	Sept. 19, 1892	4	..
Volkmar, Walter Schuyler	Pennsylvania	Sept. 6, 1892	4	..
Walker, Ralph Eric	Indiana	May 20, 1892	7	..
Washington, Pope	North Carolina	Sept. 7, 1892	4	..
Wetters, Ivan Cyrus	Colorado	Sept. 6, 1892	4	..
Wood, Duncan Mahon	Alabama	Sept. 20, 1892	4	..
Wurtsbaugh, Daniel Wilbert	Texas	May 20, 1892	7	..

Naval Cadets of the Third Class—67 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Anding, Sheldon Webb	Mississippi	May 19, 1893	5	20
Asserson, William Christian	New York	Sept. 25, 1893	2	23
Bagby, Robert Coleman	Missouri	Sept. 22, 1893	2	23
Boyd, David French, jr.	Alabama	May 19, 1893	5	20
Bryant, Samuel Woods	Pennsylvania	May 19, 1893	5	20
Chase, Gilbert	Virginia	Sept. 6, 1893	2	23
Collins, Henry Lafayette	Pennsylvania	Sept. 6, 1893	2	23
Day, John Arthur	New York	May 19, 1893	5	20
DuBose, William Gunnell	Georgia	Sept. 6, 1893	2	23
Duncan, Oscar Dibble	Alabama	Sept. 6, 1893	2	23
Eggert, Ernest Frederick	Michigan	Sept. 6, 1893	2	23
Falconer, Walter Maxwell	Ohio	Sept. 6, 1893	2	23
Giles, William Pinkney	Texas	May 20, 1893	5	20
Graeme, Joseph Wright	Pennsylvania	Sept. 6, 1893	2	23
Graham, Andrew Thomas	Illinois	Sept. 6, 1893	2	23
Hart, Thomas Charles	Michigan	May 19, 1893	5	20
Henderson, Robert William	Ohio	Sept. 22, 1893	2	23
Hepburn, Arthur Japy	Pennsylvania	Sept. 22, 1893	2	23
Herndon, Henry Raymond	Texas	May 19, 1893	5	20
Hilleary, John Francis	Maryland	Sept. 6, 1893	2	23
Holman, Frederic Ralph	Iowa	May 19, 1893	5	20
Hoopes, Edward Trimble	Pennsylvania	Sept. 6, 1893	2	23
Houston, Victor Stuart	South Dakota	Sept. 22, 1893	2	23
Jenson, Henry Norman	Wisconsin	Sept. 6, 1893	2	23
Jones, Needham Lee	Mississippi	Sept. 6, 1893	2	23
Kautz, Austin	Washington	May 19, 1893	5	20
Keenan, Ernest Clinton	New York	Sept. 6, 1893	2	23
Kempff, Clarence Selby	California	May 19, 1893	5	20
Landis, Irwin Franklin	Kansas	Sept. 6, 1893	2	23
Leahy, William Daniel	Wisconsin	May 19, 1893	5	20
McCarthy, Albert Henry	Iowa	Sept. 6, 1893	2	23
McDowell, Willis	Pennsylvania	May 19, 1893	5	20
McMullen, Stanley Hastings	Indiana	May 19, 1893	5	20
Magill, Samuel George, jr.	North Dakota	May 19, 1893	5	20
Mahony, Daniel Sullivan	Michigan	Sept. 6, 1893	2	23
Mayo, Henry Wise	Virginia	May 19, 1893	5	20
Miller, Cyrus Robinson	California	Sept. 6, 1893	2	23
Morse, John Wise	Massachusetts	Sept. 6, 1893	2	23
Murfin, Orin Gould	Ohio	Sept. 6, 1893	2	23
Naylor, Charles Jacob	Pennsylvania	Sept. 6, 1893	2	23
Overstreet, Luther Martin	Nebraska	Sept. 6, 1893	2	23
Owen, Alfred Crosby	District of Columbia	Sept. 6, 1893	2	23
Owens, Charles Truesdale	Pennsylvania	Sept. 6, 1893	2	23
Pattison, Dilly Nelson	Iowa	Sept. 6, 1893	2	23
Perrill, Harlan Page	Indiana	Sept. 6, 1893	2	23
Powell, Joseph Wright	New York	May 19, 1893	5	20
Pratt, Peter Lloyd	Illinois	May 19, 1893	5	20
Presney, Alfred Warren	Nebraska	May 19, 1893	5	20
Reynolds, William Herbert	Georgia	Sept. 6, 1893	2	23

Naval Cadets of the Third Class—67 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in previous ships	
			Months.	Days.
Richardson, Louis Clark	South Carolina.....	Sept. 6, 1893	2	3
Roshie, Clifton Charles	Maryland.....	Sept. 6, 1893	2	10
Sargent, Leonard Rundlett	Minnesota	Sept. 6, 1893	2	11
Sexton, Walton Roswell.....	Illinois	May 19, 1893	5	9
Sheffield, Fletcher Lamar	Georgia.....	Sept. 6, 1893	2	11
Shelton, Nathan Jordan.....	Nebraska	Sept. 6, 1893	2	11
Smith, Arthur St. Clair, jr	Iowa.....	Sept. 6, 1893	2	11
Sykes, Eugene Octave, jr	Mississippi	May 19, 1893	5	11
Terry, Joseph Dandridge	Virginia	May 19, 1893	5	12
Theleen, David Elias.....	Wisconsin	Sept. 6, 1893	2	11
Van Orden, George.....	Michigan	May 19, 1893	5	12
Ward, Joshua Thomason	Texas.....	May 19, 1893	5	12
Webber, George	Arkansas	Sept. 6, 1893	2	11
Wells, Horace Taylor	Missouri.....	Sept. 6, 1893	2	11
Weesels, Arthur Lewis	Iowa.....	May 19, 1893	5	11
White, William Russell	Arizona	Sept. 6, 1893	2	11
Williams, Hilary	Indiana.....	Sept. 6, 1893	2	11
Yarnell, Harry Ervin	Iowa.....	Sept. 6, 1893	2	11

Naval Cadets of the Fourth Class—83 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Abele, Clarence Arthur.....	Massachusetts.....	Sept. 6, 1894	17	10	0	0
Applewhite, Scott Carter.....	Indiana.....	May 19, 1894	18	4	2	23
Arnold, William Wood.....	New Jersey.....	May 19, 1894	17	7	2	23
Babcock, John Franklin.....	New York.....	Sept. 22, 1894	15	0	0	0
Ball, William Gustin.....	Ohio.....	Sept. 22, 1894	19	5	0	0
Bissell, Henry Harrison.....	New York.....	Sept. 6, 1894	18	6	0	0
Bonnaffon, Sylvester.....	Pennsylvania.....	Sept. 6, 1894	18	10	0	0
Boone, Charles.....	Ohio.....	Sept. 6, 1894	17	11	0	0
Briggs, Wilbur Gerheart.....	New York.....	Sept. 6, 1894	18	7	0	0
Briggs, Zeno Everett.....	Nebraska.....	Sept. 22, 1894	17	11	0	0
Brockway, Benjamin Little.....	South Carolina.....	Sept. 6, 1893	18	9	0	0
Brown, George, jr.....	At large.....	Sept. 6, 1893	18	1	0	0
Brown, Josephus Jarvis.....	Illinois.....	Sept. 6, 1894	16	7	0	0
Brown, Morris Hamilton.....	Indiana.....	May 19, 1894	17	6	2	23
Bynum, Dixson Hinds.....	Indiana.....	May 19, 1894	17	9	2	23
Caffery, John Murphy.....	Louisiana.....	Sept. 6, 1894	16	11	0	0
Constien, Edward Theodore.....	Pennsylvania.....	May 19, 1894	18	6	2	23
Cotton, Lyman Atkinson.....	North Carolina.....	Sept. 6, 1894	19	8	0	0
Cronan, William Pigott.....	Connecticut.....	Sept. 6, 1894	15	7	0	0
Dinger, Henry Charles.....	Wisconsin.....	May 19, 1894	18	2	2	23
Durham, Raymond Ewing.....	At large.....	Sept. 22, 1894	16	9	0	0
Eisbein, Arthur.....	New York.....	May 19, 1894	19	11	2	23
Elson, Herman Jacob.....	Mississippi.....	May 19, 1894	18	4	2	23
England, William Herbert.....	Arkansas.....	Sept. 6, 1894	17	10	0	0
Evans, Franck Taylor.....	At large.....	Sept. 6, 1894	18	11	0	0
Faller, Guy William.....	Wisconsin.....	May 19, 1894	16	1	2	23
Farrin, Thomas Benjamin, jr.....	Illinois.....	Sept. 22, 1894	17	7	0	0
Field, Francis Louie.....	Indiana.....	Sept. 22, 1894	15	1	0	0
Fox, Lynn Herbert.....	Wisconsin.....	Sept. 6, 1894	18	9	0	0
Gilmer, James Blair.....	Virginia.....	May 19, 1894	18	2	2	23
Gleason, Henry Miller.....	Kansas.....	Sept. 6, 1894	17	11	0	0
Graham, John Sisson.....	Colorado.....	May 19, 1894	19	1	2	23
Halligan, John, jr.....	Massachusetts.....	Sept. 6, 1894	18	3	0	0
Hand, James Alexander, jr.....	South Dakota.....	Sept. 6, 1894	18	11	0	0
Hanrahan, David Carlisle.....	Wisconsin.....	May 19, 1894	18	9	2	23
Hord, Oliver Saunders.....	Kentucky.....	May 19, 1894	18	3	2	23
Hunter, Charles Milton.....	Ohio.....	May 19, 1894	10	8	2	23
Huntington, Arthur Franklin.....	New York.....	Sept. 12, 1894	17	6	0	0
Jeffries, James Gordon.....	Arkansas.....	Sept. 6, 1894	18	3	0	0
Johnson, Thomas Lee.....	Kansas.....	May 19, 1894	19	1	2	23
Kress, James Chatham.....	Pennsylvania.....	Sept. 6, 1894	17	3	0	0
Lehfeldt, Henry August.....	Wisconsin.....	May 19, 1894	18	5	2	23
Love, James Monroe, jr.....	Virginia.....	Sept. 6, 1894	19	6	0	0
McCarty, Sterling Hicks.....	Missouri.....	Sept. 6, 1894	18	7	0	0
McIntyre, Edward William.....	California.....	Sept. 6, 1894	17	6	0	0
Macy, Ulysses Samuel.....	Missouri.....	Sept. 6, 1894	17	8	0	0
Madison, Zachariah Harvey.....	Illinois.....	Sept. 6, 1894	17	8	0	0
Mannix, Daniel Pratt.....	Ohio.....	Sept. 6, 1894	16	0	0	0
Marble, Ralph Norris, jr.....	Minnesota.....	May 19, 1894	15	2	2	23
Mitchell, Alexander Neely.....	Ohio.....	Sept. 6, 1894	18	11	0	

Naval Cadets of the Fourth Class—83 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in previous ship.	
			Years.	Months.	Months.	Days.
Moore, William Augustus	South Carolina ..	Sept. 22, 1894	19	0	0	
Morris, Bennie.....	Virginia.....	Mar. 4, 1894	19	11	0	
Nelson, Charles Preston	Massachusetts ...	May 19, 1894	17	2	0	
Peterson, Roscoe Lloyd	Michigan.....	June 1, 1894	17	10	0	
Pettengill, George Tilford	Idaho at large ...	Sept. 22, 1894	16	10	0	
Pinney, Frank Lucius	Connecticut	Sept. 6, 1894	19	9	0	
Purne, Henry Ashby	Georgia.....	Sept. 6, 1894	16	5	0	
Reisnider, John	Ohio.....	Sept. 6, 1894	17	9	0	
Roper, Walter Gordon	Georgia.....	Sept. 22, 1894	18	11	0	
Rutledge, Carl Clyde	Ohio.....	May 19, 1894	17	7	0	
Sayles, William Randall, jr	Rhode Island.....	Sept. 20, 1894	16	9	0	
Schofield, John Anderson.....	Missouri.....	Sept. 6, 1894	18	6	0	
Shane, Louis.....	Nebraska.....	Sept. 6, 1894	17	4	0	
Shay, Louis Berry	New York	Sept. 6, 1894	19	5	0	
Shorkley, Augustus Wroten	Kansas	May 12, 1894	19	11	0	
Small, Jesse McLean	Kentucky	Sept. 12, 1894	16	0	0	
Smith, George Leonard	New Hampshire	Sept. 6, 1894	18	0	0	
Stogdill, James Ellery	Indiana.....	Sept. 22, 1894	19	2	0	
Sweet, George Cook.....	New York	Sept. 22, 1894	17	2	0	
Tardy, Walter Benjamin	Arkansas.....	May 19, 1894	18	11	0	
Tarrant, William Theodore	Texas	Sept. 6, 1894	16	1	0	
Taylor, Hugh Kirkpatrick	Ohio.....	Sept. 22, 1894	19	7	0	
Thorpe, George Cyrus	Minnesota.....	May 19, 1894	19	4	0	
Tottenham, John William	Texas	Sept. 6, 1894	16	7	0	
Turner, Laurin Hamilton	Illinois.....	Sept. 6, 1894	17	5	0	
Watts, William Carleton.....	Pennsylvania.....	Sept. 22, 1894	15	2	0	
Webber, Charles H	Michigan	May 19, 1894	18	7	0	
Wells, William Benefiel	Iowa	May 19, 1894	17	4	0	
Wilcox, Luther Thomas	Illinois.....	May 19, 1894	19	2	0	
Williams, Henry	Maryland.....	Sept. 6, 1894	17	0	0	
Williams, Yancey Sullivan	South Carolina ..	Sept. 6, 1894	18	4	0	
Woods, Edward.....	Massachusetts ..	May 19, 1894	18	6	2	
Wright, Henry Tutwiler	Alabama	Sept. 6, 1894	19	2	0	

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

	October 1894	Mean ...
First Class (Line Division.....)
First Class (Engineer Division
Second Class
Third Class
Fourth Class
Total

RELATIVE STANDING OF NAVAL CADETS FOR 1893-'94.

Classes of the Naval Cadets at the United States Naval Academy, at the close of the Academic Year 1893-'94; with the relative standing of the members in each class, as determined at the Annual Examination, June, 1894.

P Physically disqualified for the naval service.

** Received 85 per cent of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for Engineer Division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick, continued with next lower class.

Relative Standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years.	Months.
• 4	Adams, Lawrence Stowell	Pennsylvania	Sept. 28, 1890	15	-
12	Babin, Prevost	New York	Sept. 6, 1890	16	1
20	Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1890	17	1
22	Bookwalter, Charles Sumner	Illinois	Sept. 6, 1890	16	1
23	Bulmer, Roscoe Carlyle	Nevada	Sept. 28, 1890	15	-
15	Churchill, Winston	Missouri	May 21, 1890	16	1
• 3	Cox, Daniel Hargate	New York	Sept. 9, 1890	17	1
32	England, Clarence	Arkansas	Sept. 5, 1890	16	-
17	Fullinwider, Simon Peter	Missouri	May 21, 1890	16	1
19	Galbraith, Gilbert Smith	Pennsylvania	Sept. 8, 1890	16	-
29	Gelm, George Earl	New York	May 22, 1890	19	-
• 2	Gillis, Irvin Van Gorder	New York	Sept. 6, 1890	15	1
14	Graham, Stephen Victor	Michigan	May 19, 1890	16	-
11	Jones, Lewis Burton	New York	May 21, 1890	17	-
23	Kavanagh, Arthur Glynn	Nebraska	May 20, 1890	19	1
16	Luby, John McClane	Texas	Sept. 8, 1890	16	1
8	McLean, Ridley	Tennessee	May 20, 1890	17	1
31	McNeely, Robert Whitehead	North Carolina	Sept. 8, 1890	17	-
24	Manion, Walter James	Louisiana	Sept. 6, 1890	17	1
25	Osborn, Robert Hatfield	New York	May 22, 1890	16	1
• 1	Robert, William Pierre	Mississippi	May 20, 1890	16	-
10	Roberts, Thomas Galen	Alabama	May 27, 1890	19	1
24	Sandoz, Fritz Louis	Louisiana	May 19, 1890	16	-
13	Scott, William Pitt	Pennsylvania	May 20, 1890	16	-
7	Sellers, David Foote	New Mexico	May 21, 1890	16	1
28	Shaw, Melville Jones	Minnesota	Sept. 6, 1890	18	-
18	Snow, Carlton Farwell	Maine	May 19, 1890	16	-
20	Spear, Roscoe	Pennsylvania	May 22, 1890	18	1
26	Stone, George Loring Porter	Georgia	Sept. 28, 1890	15	-
6	Stone, Raymond	Alabama	Sept. 5, 1890	17	-
9	Tompkins, John Thomas	Louisiana	Sept. 6, 1890	19	-
21	Turpin, Walter Stevens	Maryland	May 22, 1890	15	1
• 5	Webster, Charles	Massachusetts	Sept. 6, 1890	16	-
37	Whitted, William Scott	North Carolina	May 20, 1890	19	-

Line Division—34 Members—Annual Examination, June, 1894.

Order of merit in—										Sea service in practice ships.			
Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Discipline.	Number of demerits.	Months.	Days.	Order of annual merit.
1	3	7	5	5	2	8	8	13	7	37	5	20	4
7	16	14	17	4	13	7	11	20	16	28	5	20	12
15	4	23	14	12	21	17	18	30	31	09	5	20	20
22	23	21	26	20	0	15	23	28	27	80	5	20	22
20	11	32	22	21	34	26	16	24	13	23	5	20	23
23	11	19	19	7	15	12	22	24	11	27	5	20	15
3	5	4	7	10	4	4	6	6	5	19	5	20	* 3
32	10	31	34	13	21	25	21	21	32	108	5	20	32
18	8	21	27	24	11	16	19	28	8	27	5	20	17
16	27	13	10	33	29	24	26	17	18	38	5	20	19
26	21	28	63	25	33	34	29	31	20	49	5	20	29
5	7	1	1	1	1	3	6	10	3	9	5	11	* 2
14	15	12	11	17	16	14	8	22	29	95	5	20	14
7	24	16	13	8	8	11	15	7	8	12	5	20	11
27	17	25	20	17	14	20	26	26	34	172	5	20	33
21	24	10	15	31	24	23	23	27	19	38	5	20	16
11	11	6	8	6	6	5	3	5	25	74	5	20	8
25	28	27	23	27	31	19	19	8	33	125	5	20	31
33	17	34	32	28	28	31	32	13	22	40	5	20	34
18	26	20	29	34	26	30	34	34	21	46	5	20	25
2	1	2	2	2	3	1	1	1	1	3	5	20	* 1
11	6	14	10	15	7	12	14	12	12	22	5	20	10
28	22	30	28	13	18	29	4	19	13	16	5	20	24
23	11	17	12	19	23	21	11	2	15	31	5	20	13
4	19	9	9	15	12	8	4	17	6	15	5	20	7
31	33	32	21	28	17	27	8	9	26	51	5	20	28
13	20	18	18	23	32	22	28	32	10	26	5	20	18
30	30	29	31	22	20	32	32	16	24	38	5	20	30
34	32	24	24	25	27	32	25	11	23	41	5	20	26
7	2	8	4	3	24	10	2	4	2	8	5	20	6
10	28	4	6	11	5	2	17	15	28	65	5	20	9
17	31	11	16	30	19	17	29	32	30	85	5	20	21
6	5	3	3	8	10	6	13	2	4	13	5	20	* 5
28	34	26	25	32	30	28	31	22	16	22	5	20	27

Relative Standing of the Naval Cadets of the First Class.

Order of annual merit.	Name	State from which appointed.	Date of admission.	Age at date of admission.	
				Years.	Months.
8	Baker Henry Thomas.....	Ohio.....	Oct. 7, 1890	16	0
4	Chappell, Ralph Hubert.....	Michigan.....	May 22 1890	16	0
10	Cone, Hutch Ingham.....	Florida .. .	Sept. 5, 1890	19	0
6	Cooper, Ignatius Taylor.. .	Delaware.....	May 21, 1890	17	0
13	De Lany, Edwin Hayden .. .	Tennessee .. .	May 21, 1890	19	0
7	Hipda, Alfred Walton... ..	Alabama	Sept. 6, 1890	16	0
1	Hudgins, John Melton	Virginia	Sept. 8, 1890	16	0
5	James, Leland Frierson	South Carolina .. .	Sept. 9 1890	17	0
9	Lyon, Frank	Kentucky	May 20 1890	16	0
2	McMorris, Boling Kavanaugh .	Alabama.	Sept. 13, 1890	16	0
3	Moody, Ruseor Charles.....	Maine	Sept. 8, 1890	17	0
12	Revera, Joseph Mason	Illinois	Sept. 8, 1890	17	0
11	Winship, Emory.....	Georgia	June 3 1890	18	0

Enginer Division—13 members—Annual Examination, June, 1894.

Sea service.		Order of merit in—									Number of demerits.	Order of annual merit.
Months.	Days.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Discipline.		
2	23	5	8	8	6	8	9	12	11	5	50	8
2	23	4	9	8	8	2	13	3	5	1	14	4
2	23	10	10	6	6	9	7	9	8	11	125	10
2	23	8	2	7	10	5	6	7	9	8	70	6
2	23	13	13	12	13	12	10	11	12	13	164	13
2	23	1	4	2	2	13	2	10	9	12	162	7
2	23	5	1	1	1	1	1	2	13	3	50	1
2	23	2	7	4	9	3	4	4	2	7	67	5
2	23	9	5	10	5	11	5	5	3	9	107	9
2	23	3	2	3	4	6	3	6	3	2	35	2
2	23	7	6	5	3	6	7	1	1	4	47	3
2	23	11	12	11	11	10	11	8	7	10	119	12
2	23	12	11	13	12	4	11	13	6	6	61	11

Relative Standing of the Naval Cadets of the

Order of general merit.	Name.	State from which appointed.	Date	
			admission.	
37	Bagley, Worth	North Carolina	7	1
4	Baldwin, Frank Pardee	New Jersey	7	1
8	Bannon, Philip Michael	Maryland	7	1
40	Barnes, Cassius Bartlett	Oklahoma	7	1
20	Bennett, Kenneth Maratt	New Jersey	7	1
36	Breckinridge, Joseph Cabell	Kentucky	7	1
3	Brumby, Frank Hardman	Georgia	7	1
13	Butler, Henry Varnum, jr	New York	4	1
10	Chester, Arthur Tremaine	At large	7	1
9	Cushman, William Reynolds	New York	7	1
12	Davidson, William Christopher	South Dakota	7	1
23	Dennett, Stanley Pullen	Maine	7	1
25	Dick, Thomas Murritt	South Carolina	7	1
42	Dunn, Edward Howard	Connecticut	7	1
29	Eckhardt, Ernst Frederick	Wisconsin	7	1
20	Freeman, Frederic Newton	Indiana	7	1
41	Garrison, Daniel Mershon	New Jersey	7	1
21	Gibbard, Walter Rockwell	At large	7	1
22	Groesbeck, William Gerard	Ohio	7	1
27	Hall, Newt Hamill	Texas	7	1
35	Hard, Walter Blake	South Carolina	7	1
31	Johnston, Rufus Zenas, jr	North Carolina	7	1
46	Karne, Franklin D	Ohio	7	1
24	Klemann, John Valentine	New York	7	1
31	Knepper, Orlo Smith	Pennsylvania	7	1
7	Laing, Harris	Illinois	7	1
24	McCormack, Michael James	Michigan	7	1
26	Mallory, Charles King	Tennessee	7	1
41	Mann, George Hiram	Pennsylvania	7	1
41	Mansfield, Newton	Ohio	7	1
44	Marshall, John Francis, jr	Texas	7	1
42	Merritt, Darwin Robert	Iowa	7	1
17	Monaghan, John Robert	Washington	7	1
22	Morton, James Proctor	Missouri	7	1
22	Raby, James Joseph	Michigan	7	1
29	Savere, Joseph Draper, jr	New York	7	1
41	Smith, Stuart Farrar	Pennsylvania	7	1
14	Stanley, William Harry	California	7	1
1	Takasaki, Motoboku	Empire of Japan	7	1
2	Todd, David Wmster	California	7	1
1	Vestal, Samuel Curtis	Indiana	7	1
19	Wadsworth, Alphon James	New York	7	1
29	Wacker, Charles Henry	Massachusetts	7	1
24	Wacker, James Leung	North Carolina	7	1
24	Watson, Edward Howe	Kentucky	7	1
27	W. Bates, Harry Craig	Mississippi	7	1

b Present continued with his class

Class—46 members—Annual Examination, June, 1894.

Age at date of admission.		Order of merit in—									Number of demerits.	Order of general merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.		
17	5	33	39	40	42	33	43	3	33	35	91	37
17	11	3	2	3	13	18	2	16	4	21	49	4
19	2	11	19	15	8	7	9	21	22	5	20	8
19	8	40	23	27	31	27	24	25	32	44	159	40
16	9	23	10	25	38	24	9	13	35	23	39	20
19	6	41	16	36	25	19	27	9	45	39	123	36
16	11	19	3	18	38	3	6	5	27	3	11	3
17	6	5	26	10	34	14	21	33	17	7	25	13
15	9	17	19	11	38	5	17	43	3	11	31	10
16	4	26	24	6	20	4	14	27	7	30	59	9
19	2	14	22	9	4	15	12	8	19	26	57	12
18	2	29	32	30	22	15	32	22	31	14	38	23
18	5	15	6	4	13	9	7	11	15	7	25	e5
18	5	35	43	44	25	38	39	35	46	38	115	e42
18	9	43	45	41	28	13	33	42	13	41	154	e39
15	9	31	34	16	31	36	38	40	27	31	56	e30
17	1	11	14	14	20	15	7	41	7	23	52	e14
16	1	6	16	22	45	30	31	6	11	13	41	21
17	0	2	4	2	41	2	3	2	4	36	79	*2
18	8	36	30	29	46	25	24	27	37	18	45	27
18	3	25	42	45	8	43	37	34	34	16	33	35
17	2	26	15	26	30	41	41	37	23	33	82	33
17	9	17	7	21	17	23	16	16	14	14	32	e16
15	10	21	32	32	43	30	27	14	24	32	47	28
16	3	29	28	39	34	30	22	31	36	28	54	31
17	7	3	13	8	18	10	5	29	26	7	20	7
17	10	46	41	43	31	40	44	35	41	5	20	38
16	1	10	11	6	29	5	4	26	20	26	47	e3
18	3	39	36	36	43	27	34	20	43	42	146	41
17	11	7	19	5	2	33	17	24	1	3	27	e11
17	8	43	44	24	16	35	24	37	10	46	227	e44
19	4	42	30	33	19	38	34	45	41	40	137	e43
18	5	22	11	16	25	12	12	18	40	18	39	17
17	7	31	16	18	37	20	23	14	20	43	147	e32
16	11	34	8	36	6	25	29	9	25	1	7	22
16	6	36	24	34	34	20	34	30	37	18	44	29
16	10	1	1	1	10	1	1	1	2	2	21	*1
18	8	11	37	18	5	20	11	39	29	16	37	18
17	9	45	46	46	12	46	46	46	6	23	43	6
17	2	8	9	27	23	36	29	3	18	34	81	25
18	1	16	5	23	11	11	14	22	44	12	37	15
16	4	20	27	11	7	29	19	32	9	21	66	19
17	10	28	38	31	1	43	45	44	12	7	10	e26
17	0	9	29	13	3	8	20	11	16	45	201	24
17	6	28	39	42	13	42	39	7	30	24	61	34
16	7	38	35	34	23	45	41	18	37	37	96	;

Relative Standing of the Naval Cadets of the U. S. N. S. S.

Order of annual merit.

	Name.	State from which appointed	Date of admission.
8	Blaset, Henry Overstreet.....	Maryland	Sept. 6 ..
19	Blandy, Edwin Chauncey	Pennsylvania	May 19 ..
43	Bronson, Amon, jr.	Nebraska.....	Sept. 2 ..
67	Bryant, John Jay, jr.	Illinois	May 2 ..
34	Bart, Charles Perry.....	Georgia.....	Sept. 1 ..
33	Castleman, Kenneth Galleher.....	Kentucky	Sept. 4 ..
11	Cluverius, Wat Tyler, jr.	Louisiana	May 2 ..
1	Cooke, Robert Powell Page	Virginia	Sept. 14 ..
7	Craven, Thomas Tingey.....	New Hampshire	Sept. 19 ..
42	Crenshaw, Arthur	Alabama.....	Sept. 4 ..
37	Curtin, Roland Irvin	Pennsylvania.....	Sept. 6 ..
41	Deane, Russell Andrews	New York	May 2 ..
44	Doak, Henry Melville, jr.	Tennessee	Sept. 19 ..
5	Earle, Ralph	Massachusetts.....	Sept. 6 ..
23	Ellis, Mark Saint Clair	Arkansas	July 1 ..
18	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 1 ..
12	Gilpin, Charles Edward	Michigan	Sept. 6 ..
36	Hansenstein, George Jacob	Mississippi	Sept. 6 ..
40	Henry, James Buchanan jr	New York	Sept. 6 ..
4	Holden, Jonas Hannibal	Vermont.....	May 2 ..
32	Jessop, Earl Percy	West Virginia.....	Sept. 6 ..
13	Jones, Junius Henry	Virginia	Sept. 19 ..
10	Kalbach, Andrew Edwin	Pennsylvania	July 1 ..
24	Kearney, Thomas Albert	Missouri	Sept. 6 ..
16	Kimball, Henry Swift	Massachusetts.....	Sept. 6 ..
25	Knox, Dudley Wright	Tennessee	Sept. 6 ..
2	Leiper, Charles Lewis	Pennsylvania	Sept. 6 ..
9	Lincoln, Gatewood Sanders	Missouri.....	May 2 ..
1	Littfield, William Lord	Massachusetts.....	Sept. 20 ..
17	Love, James Monroe jr	Virginia	May 2 ..
22	MacArthur, Arthur jr.	Wisconsin.....	Sept. 6 ..
28	McCauley, Edward jr	New York	Oct. 19 ..
31	McConnell, Richard Gray	Pennsylvania	May 2 ..
27	Marshall, Albert Ware	Texas	Sept. 6 ..
15	Maddleton, George Lord	South Carolina	Sept. 8 ..
29	Mustin, Henry Crocker	Tennessee	Sept. 6 ..
14	Palmer, Leigh Carville	Missouri	Sept. 6 ..
3	Pear, Charles Langstreet	New York	Sept. 6 ..
26	Rice, George Benjamin	Kentucky.....	Sept. 6 ..
20	Rogers, Frank Eugene	At large	Sept. 6 ..
31	Robinson, Richard Hallett	Ohio	Sept. 6 ..
21	Roy, John Hubert	New York	Sept. 6 ..

Class—51 members—Annual Examination, June, 1894.

Age at date of admission.		Order of merit in—							
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Dicipline.	Number of demerits.	Order of annual merit.
19	10	5	4	9	5	16	27	105	8
18	8	45	35	27	36	44	34	112	39
16	0	25	38	40	38	50	51	259	43
16	5	50	51	47	51	41	47	241	§ r
17	2	33	35	42	25	26	27	95	34
16	5	40	5	33	22	20	46	234	33
17	4	13	9	3	13	35	21	86	11
17	10	41	48	33	18	49	42	182	†
19	2	6	16	13	14	3	10	79	7
17	6	37	45	45	46	47	34	130	42
18	3	28	43	29	43	24	38	148	37
18	0	47	23	30	40	51	36	151	41
17	3	46	38	37	47	45	50	245	44
18	4	3	13	9	9	9	33	99	5
19	3	23	14	25	10	28	31	87	23
17	11	18	22	18	24	14	9	40	18
19	9	20	19	51	1	8	17	77	12
16	11	41	37	32	37	31	22	83	36
16	8	37	38	38	31	32	49	223	40
19	1	9	7	11	20	2	1	38	4
19	0	35	23	22	23	40	11	74	32
18	2	4	12	28	44	27	6	36	13
19	10	8	7	12	14	33	23	90	10
17	6	25	30	17	28	15	14	79	24
18	7	14	23	26	16	16	26	136	16
15	2	27	29	33	42	10	8	52	25
16	6	10	2	7	3	5	17	83	2
16	9	6	6	2	8	33	23	103	9
18	9	48	34	31	44	5	43	183	†
16	3	41	47	48	49	46	47	228	§ r
16	3	23	33	19	28	23	4	38	22
17	1	34	42	49	21	22	2	40	28
19	11	41	27	22	33	24	27	103	31
18	5	28	18	41	31	20	14	88	27
17	7	17	15	5	6	36	32	96	15
18	7	36	31	44	34	1	44	210	29
19	7	22	44	8	10	5	6	63	14
18	11	10	3	6	2	13	11	73	3
19	4	16	38	33	27	43	40	165	35
17	2	30	21	16	12	19	23	120	20
17	5	1	1	1	4	4	5	52	*1
15	4	37	32	20	17	29	37	173	30

Relative Standing of the Naval Cadets of the Inst.

(Order of annual merit.			
	Name.	State from which appointed	Date of admission.
44	Tanasig, Paul Edward	At large	Sept 6 1894
19	Tozer, Charles Maxson	New York	Sept 19 1894
1	Volkmar, Walter Schuyler	Pennsylvania	Sept 6 1894
6	Walker, Ralph Eric	Indiana	May 20, 1894
38	Washington, Pope	North Carolina	Sept 7 1894
17	Wettengel, Ivan Cyrus	Colorado	Sept 6 1894
47	Wiley, Walter Aquila	Ohio	Sept 6 1894
26	Wood, Durran Mahon	Alabama	Sept 20 1894
21	Wurtsbaugh, Daniel Wilbert	Texas	May 20, 1894

dd Died July 23, 1894, at the navy yard New York

Class—51 members—Annual Examination, June, 1894—Continued.

Age at date of admission.		Order of merit in—							
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Number of demerits.	Order of annual merit.
17	9	32	49	50	47	30	14	76	dd
16	2	12	17	13	26	34	27	102	19
18	3	49	45	42	39	10	17	114	†
15	8	2	11	15	6	18	13	73	6
19	11	31	26	38	35	41	39	160	38
16	3	21	10	3	10	38	20	95	17
19	10	51	50	36	50	48	45	191	5 r
15	11	19	19	24	40	12	41	172	26
19	3	15	27	20	30	37	3	26	21

while attached to the U. S. practice-ship *Bancroft*.

Relative Standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
	Anding, Sheldon Webb.....	Mississippi.....	May 19 1894
43	Anderson, William Christian	New York.....	Sept. 23 1894
19	Bagby, Robert Coleman	Missouri.....	Sept. 22 1894
31	Boyd, David French, Jr.....	Alabama.....	May 19 1894
8	Brockway, Benjamin Little	South Carolina	Sept. 6 1894
8	Brown, George, Jr	At large.....	Sept. 6 1894
1	Bryant, Samuel Woods	Pennsylvania.....	May 19 1894
23	Chase, Gilbert.....	Virginia.....	Sept. 6 1894
17	Collins, Henry Lafayette	Pennsylvania	Sept. 6 1894
24	Day, John Arthur	New York.....	May 19 1894
*1	Du Bose, William Gunnell	Georgia.....	Sept. 6 1894
41	Duncan, Oscar Dibble	Alabama.....	Sept. 6 1894
13	Eggert, Ernest Frederick	Michigan.....	Sept. 6 1894
44	Falconer, Walter Maxwell.....	Ohio.....	Sept. 6 1894
1	Giles, William Pinkney	Texas.....	May 20 1894
16	Graeme, Joseph Wright	Pennsylvania.....	Sept. 6 1894
51	Graham, Andrew Thomas	Illinois.....	Sept. 6 1894
7	Green, Grant	Michigan.....	May 19 1894
42	Hart, Thomas Charles	Michigan.....	May 19 1894
48	Henderson, Robert William	Ohio.....	Sept. 22 1894
*3	Hepburn, Arthur Japy	Pennsylvania	Sept. 22 1894
15	Herndon, Henry Raymond	Texas.....	May 19 1894
50	Hilkey, John Francis	Maryland	Sept. 6 1894
18	Holman, Frederic Ralph	Iowa.....	May 19 1894
20	Hopewell, Edward Trimble	Pennsylvania.....	Sept. 6 1894
9	Houston, Victor Stuart	South Dakota	Sept. 22 1894
10	Jeffers, William Nicholson	At large.....	May 19 1894
37	Jensen, Henry Norman.....	Wisconsin.....	Sept. 6 1894
8	Jones, Newham Lee	Mississippi	Sept. 6 1894
21	Kautz, Austin.....	Washington	May 19 1894
11	Keenan, Ernest Clinton	New York.....	Sept. 6 1894
1	Kempff, Clarence Selby	California	May 19 1894
12	Landis, Irwin Franklin	Kansas.....	Sept. 6 1894
25	Leahy, William Daniel	Wisconsin	May 19 1894
17	Lentz, Trevor William	At large.....	May 19 1894
26	McCarthy, Albert Henry	Iowa.....	Sept. 6 1894
7	McDonald, Douglas Cassin	California	May 19 1894
9	McDowell, Willie	Pennsylvania	May 19 1894
51	McMullen, Stanley Hastings	Indiana	May 19 1894
34	Magill, Samuel George, Jr	North Dakota	May 19 1894
7	Maloney, Daniel Sullivan	Michigan.....	Sept. 6 1894
1	Mayer, Henry Wison	Virginia	May 19 1894
1	Miller, Cyrus Robinson	California	Sept. 6 1894

Class—77 members—Annual Examination, June, 1894.

Age at date of admission.		Order of merit in—				Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.		
19	6	49	74	66	29	41	†
18	0	53	47	30	57	84	43
16	11	57	18	8	33	39	19
16	8	11	14	20	74	283	31
18	9	(a)	(a)	(a)	(a)	28	s
18	1	(a)	(a)	(a)	(a)	28	s
15	11	69	52	35	61	95	†
19	11	37	23	17	22	30	23
16	9	4	37	32	45	67	17
17	8	17	42	5	72	201	24
16	11	1	1	2	1	0	'1
19	1	29	37	62	14	46	41
17	3	13	13	18	48	30	13
17	8	35	34	42	66	161	44
18	1	52	58	73	8	12	†
18	0	46	6	14	18	28	16
19	0	50	60	62	11	12	53
19	9	66	58	50	14	44	Pr
15	11	40	50	39	52	56	42
16	5	53	39	57	40	53	48
15	11	7	11	6	40	64	'3
17	4	25	9	23	49	52	15
19	9	37	57	54	52	59	50
19	2	30	16	19	33	50	18
17	9	2	68	45	65	142	35
17	2	34	44	1	10	28	9
16	1	66	44	4	67	188	Pr
17	7	61	47	67	14	25	57
18	9	30	9	6	26	26	8
19	8	22	40	12	33	70	21
17	8	24	29	44	26	36	33
18	11	69	56	61	33	31	†
18	2	14	28	40	49	37	32
18	0	57	52	54	60	78	55
15	7	a	a	a	a	63	Pr
17	8	45	55	65	56	56	56
17	1	69	73	68	64	102	Pr
18	3	33	35	50	18	45	39
19	11	57	63	47	20	47	51
17	9	60	65	45	59	78	54
19	8	8	5	16	52	61	7
16	7	63	65	52	73	272	60
18	11	14	19	10	29	50	12

Relative Standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission
1	Morse, John Wisc	Massachusetts	Sept. 6 1881
25	Mustin Orin Gould	Ohio	Sept. 6 1881
37	Naylor, Charles Jacob	Pennsylvania	Sept. 6 1881
47	Oglesby, Richard James, jr	At large	May 10 1882
20	Overstreet Luther Martin	Nebraska	Sept. 6 1881
20	Owen Alfred Crosby	District of Columbia	Sept. 6 1881
25	Owens, Charles Truesdale	Pennsylvania	Sept. 6 1881
1	Pattison, Dilly Nelson	Iowa	Sept. 6 1881
33	Perrill, Marlan Page	Indiana	Sept. 6 1881
36	Powell, Joseph Wright	New York	May 10 1881
28	Pratt, Peter Lloyd	Illinois	May 10 1881
10	Presney Alfred Warren	Nebraska	May 10 1881
22	Reynolds, William Herbert	Georgia	Sept. 6 1881
38	Richardson, Louis Clark	South Carolina	Sept. 6 1881
34	Rushie Clifton Charles	Maryland	Sept. 6 1881
11	Sargent, Leonard Rudlett	Minnesota	Sept. 6 1881
40	Sexton, Walton Roswell	Illinois	May 10 1881
32	Sheffield, Fletcher Lamar	Georgia	Sept. 6 1881
52	Shelton, Nathan Jordan	Nebraska	Sept. 6 1881
46	Smith Arthur St. Clair, jr	Iowa	Sept. 6 1881
47	Sykes, Eugene Octave, jr	Mississippi	May 10 1880
16	Tarrant, William Theodore	Texas	Sept. 6 1881
11	Taylor, Hugh Kirkpatrick	Ohio	Sept. 6 1881
27	Terry, Joseph Dantridge	Virginia	May 10 1881
14	Thelen David Elias	Wisconsin	Sept. 6 1881
50	Van Orden George	Michigan	May 10 1881
49	Ward Joshua Thomason	Texas	May 10 1881
45	Webber, George	Arkansas	Sept. 6 1881
17	Wells Horace Taylor	Missouri	Sept. 6 1881
57	Weaver, Arthur Lewis	Iowa	May 10 1881
26	White William Russell	Arizona	Sept. 6 1881
29	Williams Hilary	Indiana	Sept. 6 1881
17	Williams, Yancey Sullivan	South Carolina	Sept. 6 1881
34	Yarnell, Harry Ervin	Iowa	Sept. 6 1881

Class—77 members—Annual Examination, June, 1894—Continued.

Age at date of admission.		Order of merit in—				Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.		
18	3	65	31	11	40	19	†
17	4	16	22	42	7	16	25
17	11	55	47	27	22	60	37
17	7	72	68	31	29	37	‡ r
19	10	12	36	54	4	12	30
18	0	25	23	19	40	56	20
15	3	36	19	40	02	64	35
17	7	64	71	70	51	48	†
18	9	3	3	21	22	34	*5
16	3	4	6	26	3	16	*6
18	5	25	23	13	69	211	28
19	11	19	15	9	13	27	10
19	4	25	16	28	33	60	22
18	10	18	31	62	45	19	38
16	0	41	33	34	26	51	34
17	1	19	3	25	45	51	11
16	8	37	30	48	33	40	40
17	6	6	8	3	4	16	*2
19	11	62	70	32	57	81	52
19	8	44	40	59	20	27	46
16	10	50	41	38	63	102	47
15	1	74	51	.....	40	44	§ r
18	6	73	67	71	14	24	§ r
19	3	43	27	23	8	27	27
17	10	10	12	36	22	32	14
15	1	42	64	52	69	173	59
19	5	47	60	60	2	20	49
16	4	47	42	41	29	32	45
16	10	55	60	69	11	15	§ r
19	10	30	54	58	71	225	57
17	3	21	19	14	68	185	26
18	3	23	26	36	33	47	29
17	5	68	72	71	52	34	§ r
17	10	9	2	21	6	12	*4

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

October 16, 1893, to October 4, 1894.

APPOINTED ENSIGNS JULY 1, 1894.

Naval Cadet Campbell, Joseph Randolph	Class of 1894
Naval Cadet Day, George Calvin	Class of 1894
Naval Cadet Evans, Holden A	Class of 1894
Naval Cadet McNamee, Luke	Class of 1894
Naval Cadet Sawyer, Frederick Lewis	Class of 1894
Naval Cadet Hussey, Charles Lincoln	Class of 1894
Naval Cadet Blakely, John Russell Young	Class of 1894
Naval Cadet Jewell, Charles Theodore	Class of 1894
Naval Cadet Davison, Gregory Caldwell	Class of 1894
Naval Cadet Thompson, Leon Seymour	Class of 1894
Naval Cadet Traut, Frederick Augustus	Class of 1894
Naval Cadet Hines, John Fore	Class of 1894
Naval Cadet Payne, Fred Rounselle	Class of 1894
Naval Cadet Symington, Powers	Class of 1894
Naval Cadet Stirling, Yates, jr	Class of 1894
Naval Cadet Mallison, George	Class of 1894
Naval Cadet Pringle, Joel Robert Poinsett	Class of 1894
Naval Cadet McCormick, Benjamin Bernard	Class of 1894

APPOINTED ASSISTANT ENGINEERS JULY 1, 1894.

Naval Cadet Porter, John Singleton	Class of 1894
Naval Cadet Crank, Robert Kyle	Class of 1894
Naval Cadet Moses, Stanford Elwood	Class of 1894
Naval Cadet Hasbrouck, Raymond De Lancey	Class of 1894

APPOINTED ASSISTANT NAVAL CONSTRUCTORS JULY 1, 1894

Naval Cadet Bueret, John Dougall	Class of 1894
Naval Cadet McDonald, Joseph Ezekiel	Class of 1894
Naval Cadet Ferguson, Homer Lenoir	Class of 1894

APPOINTED SECOND LIEUTENANTS U. S. MARINE CORPS, JULY 1, 1894

Naval Cadet Dawson, William Charles	Class of 1894
Naval Cadet Low, Theodore Henry	Class of 1894
Naval Cadet Ball, Walter	Class of 1894
Naval Cadet Davis, Austin Rockwell	Class of 1894
Naval Cadet Russell, John Henry, jr	Class of 1894
Naval Cadet Macklin, Charles Fearn	Class of 1894
Naval Cadet Borden, Thomas Sheppard	Class of 1894

HONORABLY DISCHARGED JUNE 30, 1894.

Naval Cadet Gamble, Aaron L.....	Class of 1892
Naval Cadet Mather, George H.....	Class of 1892
Naval Cadet Stitt, Thomas L.....	Class of 1892
Naval Cadet Myers, John T.....	Class of 1892
Naval Cadet Kellogg, Edward S.....	Class of 1892
Naval Cadet Allen, David V.....	Class of 1892

RESIGNED.

Naval Cadet Shea, Patrick F., third class	Oct. 19, 1893
Naval Cadet Enbody, Josiah W., fourth class	Jan. 27, 1894
Naval Cadet Martin, Nathaniel M., second class.....	Feb. 1, 1894
Naval Cadet Mitchell, Mason E., third class.....	Feb. 6, 1894
Naval Cadet Hunter, Charles M., fourth class	Feb. 5, 1894
Naval Cadet Tottenham, Josiah W., fourth class	Feb. 6, 1894
Naval Cadet Buford, Charles S., fourth class.....	Feb. 7, 1894
Naval Cadet Eskridge, Oliver S., fourth class.....	Feb. 7, 1894
Naval Cadet Hord, Oliver S., fourth class.....	Feb. 7, 1894
Naval Cadet Peters, Francis M., fourth class.....	Feb. 7, 1894
Naval Cadet Robinson, William A., fourth class	Feb. 7, 1894
Naval Cadet Tonkin, John B., fourth class	Feb. 7, 1894
Naval Cadet Wells, William B., fourth class.....	Feb. 7, 1894
Naval Cadet Woods, Edward, second class.....	Feb. 7, 1894
Naval Cadet Morris, Bennie, fourth class	Feb. 7, 1894
Naval Cadet Watson, Henry W., fourth class	Feb. 7, 1894
Naval Cadet Rutledge, Carl Clyde, fourth class.....	Mar. 27, 1894
Naval Cadet Buttrick, James T., fourth class	April 4, 1894
Naval Cadet Kress, James C., fourth class	May 18, 1894
Naval Cadet Bryant, John Jay, third class.....	June 13, 1894
Naval Cadet Love, James M., jr., third class	June 13, 1894
Naval Cadet Wiley, Walter A., third class.....	June 13, 1894
Naval Cadet Tarrant, William T., fourth class.....	June 14, 1894
Naval Cadet Taylor, Hugh K., fourth class	June 14, 1894
Naval Cadet Williams, Yancey S., fourth class.....	June 14, 1894
Naval Cadet McDougal, Douglas C., fourth class.....	June 16, 1894
Naval Cadet Leutze, Trevor W., fourth class.....	Sept. 10, 1894
Naval Cadet Oglesby, Richard J., jr., fourth class	Oct. 1, 1894
Naval Cadet Jeffers, William N., fourth class	Oct. 3, 1894
Naval Cadet Williams, Harry C., second class	Oct. 3, 1894
Naval Cadet Green, Grant, fourth class	Oct. 3, 1894
Naval Cadet Falk, Julius P., fourth class.....	Oct. 3, 1894

DROPPED.

Naval Cadet Olsen, Mack H., third class.....	Mar. 10, 1894
Naval Cadet Spitzer, Max, third class	Mar. 10, 1894

DEATHS.

Naval Cadet Taussig, Paul E., second class	July 23, 1894
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MERIT-ROLLS FOR 1893-'94.

Merit rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 88, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one half of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent of the multiple in any year shall be distinguished by a star affixed to their names on the merit rolls." (Regulations U. S. Naval Academy, § 10.)

The diplomas of cadets whose final marks on the graduating merit roll are not less than 85 per cent of the maximum read "passed with distinction;" those whose final marks are between 74 per cent and 85 per cent of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent and 74 per cent of the maximum read "passed

p Physically disqualified for the naval service.

r Received 85 per cent of the multiple.

t Found deficient, allowed a re-examination, passed, and continued with class.

z Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

h Found deficient, and recommended to be dropped.

c Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for engineer division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick, continued with next class.

LINE DIVISION—31 MEMBERS.

Order of merit.	NAME.	Seamanship and naval construction.		Ordnance and gunnery.		Navigation and surveying.		Steam machinery, engines, and boilers.		International law.		French, Spanish, and German.		Cruise reports.		Navigation notes, books, journals, and station bills.		Aggregate for final examination.		Aggregate for four years.		Final aggregate.		ASSIGNMENT.
		56	44	44	44	20	24	28	16	8	240	760	1,000											
	Maxima																							
1	Joseph R. Campbell*	48.30	42.79	40.37	18.20	22.20	24.02	13.20	7.06	216.14	636.04	852.18	Ensign.											
2	George C. Day	48.16	41.36	35.31	15.35	17.58	21.35	14.84	7.26	201.21	648.14	849.35	Ensign.											
3	Holden A. Evans	52.08	41.14	38.50	17.00	22.80	20.86	14.16	7.80	214.34	630.42	844.76	Ensign.											
4	Luke McNamee	49.84	40.26	34.43	17.10	21.72	19.74	14.88	6.80	204.77	639.74	844.51	Ensign.											
5	Frederick L. Sawyer	49.70	43.34	38.50	17.40	21.48	20.16	13.76	7.66	212.00	629.52	841.52	Ensign.											
6	Charles L. Hussey	46.76	39.93	35.75	14.75	21.96	20.87	15.72	7.86	203.60	628.77	832.37	Ensign.											
7	John R. Y. Blakely	44.24	37.95	35.53	15.70	19.32	22.47	13.96	6.86	196.03	632.42	828.45	Ensign.											
8	Charles T. Jewell	46.48	38.06	34.54	11.90	21.86	22.40	14.28	5.46	194.48	631.40	825.88	Ensign.											
9	William C. Dawson	41.58	35.97	32.34	10.70	21.42	30.87	14.24	0.14	193.26	632.29	825.55	Second Lieutenant, U. S. M. C.											
10	George C. Davison	47.18	41.14	37.95	15.30	17.40	20.93	14.64	6.94	201.48	619.22	820.70	Ensign.											
11	Leon S. Thompson	44.80	36.19	31.24	13.85	19.02	19.11	12.96	0.36	183.53	604.70	788.23	Ensign.											
12	Frederick A. Traut	43.54	33.33	32.34	9.95	18.66	27.96	14.48	6.14	186.40	583.80	770.20	Ensign.											
13	John F. Hines	40.04	35.97	32.34	14.55	20.70	19.53	14.08	6.94	184.15	584.83	768.98	Ensign.											
14	Fred R. Payne	42.84	41.03	33.22	17.15	20.04	21.28	13.84	6.94	196.34	552.08	748.42	Ensign.											
15	Powers Symington	44.94	35.09	28.27	11.45	21.30	24.64	12.56	5.80	184.05	553.84	737.89	Ensign.											
16	Yates Stirling, jr	43.12	34.98	32.24	13.90	17.10	18.41	12.96	7.40	180.11	557.29	737.40	Ensign.											
17	Theodore H. Low	42.14	35.31	30.58	10.20	19.68	19.04	12.16	5.86	174.97	562.36	737.33	Second Lieutenant, U. S. M. C.											
18	George Mallison	43.40	36.30	30.69	13.85	20.64	20.02	12.92	5.46	183.28	551.42	734.70	Ensign.											
19	Walter Ball	40.96	37.73	35.20	11.80	19.02	18.27	11.52	7.02	187.46	547.10	734.56	Second Lieutenant, U. S. M. C.											
P 20	Aaron L. Gamble	43.68	38.83	33.11	13.65	19.38	19.25	13.32	5.86	187.08	542.80	729.88	Honorably discharged.											

* Received 85 per cent of maximum multiple.

Merit-roll of the Naval Cadets of the Graduating Class at the conclusion of the Six Years' Course, June, 1894—Continued.

LINE DIVISION—31 MEMBERS—Continued.

NAME	Final aggregate.										ASSIGNMENT.
	Seamanship and gunnery.	Ordnance and gunnery.	Navigation and surveying.	Steam machinery and boiler.	International law.	French, Spanish and German.	Cruise reports.	Navigation notes, books, journals, and station bills.	Aggregate for final examination.	Aggregate for four years.	
Maxima	56	64	44	36	24	24	16	8	240	760	1,000
21 Joel R. P. Pringle	42 24	32 12	31 37	7 60	19 26	24 29	14 12	5 46	176 90	552 90	729 80 Ensign.
22 Henry R. McCormick	41 30	31 24	31 90	11 20	21 12	22 12	13 68	6 24	178 80	548 70	727 50 Ensign.
23 Austin R. Davis	40 60	30 16	33 48	14 55	17 76	21 00	14 08	6 14	187 17	539 48	726 65 Second Lieutenant, U. S. M. C.
24 John H. Russell, Jr.	39 34	28 28	20 60	10 30	17 94	17 57	14 40	7 00	175 53	544 72	720 24 Second Lieutenant, U. S. M. C.
25 George H. Mather	42 14	27 50	29 92	11 50	18 96	19 74	12 56	5 26	167 58	552 55	729 13 Honorably discharged.*
26 Charles F. Macklin	44 38	35 42	32 56	9 60	19 14	14 84	15 52	6 40	177 86	541 70	719 56 Second Lieutenant, U. S. M. C.
27 Thomas L. Stitt	34 64	29 26	27 50	6 06	14 24	20 02	13 44	5 54	161 59	557 56	719 15 Honorably discharged.*
28 Thomas N. Horden	38 78	29 48	27 50	10 75	17 94	24 36	11 84	5 54	166 19	552 31	718 50 Second Lieutenant, U. S. M. C.
29 John T. Myers	44 34	31 35	24 27	8 20	18 24	20 76	12 92	5 06	169 78	545 44	715 22 Honorably discharged.
30 Edward C. Kellogg	39 29	27 61	27 50	10 45	18 66	17 50	13 20	6 24	160 46	540 68	701 14 Honorably discharged.
31 David Van H. Allen	39 50	26 85	31 35	13 75	19 14	17 92	11 28	6 10	175 59	521 77	697 36 Honorably discharged.

* At his own request

NOTE—Naval Cadets Joseph K. McDonald and Homer I. Ferguson appointed assistant naval constructors did not appear at the final graduating examination

ENGINEER DIVISION—4 MEMBERS.

Order of merit.	NAME.	ASSIGNMENT.									
		Seamanship and naval construc- tion.	Marine engineer.	Designing machine- ry.	Boilers.	French, Spanish, and German.	Cruise reports.	Journals and sta- tion bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.
	Maxima	32	72	36	40	28	16	16	240	760	1,000
1	John S. Porter	26.00	66.78	32.85	35.10	21.14	12.44	16.00	210.31	623.16	833.47
2	Robert K. Crank	23.04	58.68	29.25	33.10	22.26	11.60	14.56	192.49	553.26	745.75
3	Stanford E. Moses	22.88	58.14	25.11	28.10	24.43	14.72	16.00	181.38	553.05	742.43
4	Raymond DeL. Hasbrouck	24.16	61.92	31.05	32.70	18.76	14.68	14.16	197.43	539.29	736.72

NOTE.—Naval Cadet John D. Bueret, appointed assistant naval constructor, did not appear at the final graduating examination.

Merit-roll, for the four years ending June, 1893, of the Naval Cadets of the Class appointed in 1889, now performing required service afloat—Line Division—38 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General average for four years.
		76	132	224	304	736
1	Wilfrid Van N. Powelson	68.49	138.83	201.36	272.83	681.48
2	William S. Montgomery	62.48	139.10	199.56	272.80	673.94
3	Edwin A. Elder	67.70	136.73	196.78	272.70	673.91
4	Frank H. Clark, jr.	65.06	133.25	189.01	252.72	640.04
5	Claude E. Fitch	61.76	133.56	188.95	246.02	630.29
6	Henry H. Ward	66.56	126.93	189.35	246.89	630.73
7	Joseph A. Perry	52.70	124.64	188.59	257.94	623.87
8	Eugene L. Biaset	70.16	130.93	179.98	275.67	656.74
9	Walter S. Crosley	61.40	127.75	181.08	243.42	613.65
10	Charles J. Lang	62.95	128.86	180.87	238.04	610.72
11	Edward H. Campbell	60.08	126.23	176.76	244.79	607.86
12	Louis J. Magill	60.76	136.35	173.24	227.54	597.89
13	Thomas D. Parker	67.90	127.48	173.96	211.67	580.01
14	David M. Berry	56.67	120.68	178.30	244.02	599.67
15	Thomas S. Wilson	58.81	121.78	174.99	270.40	625.98
16	John S. Doldridge	60.25	126.45	171.14	226.91	584.75
17	Henry A. Pearson	53.20	118.80	174.50	224.16	560.66
18	William K. Gies	60.71	124.26	171.80	224.75	581.52
19	Allen M. Cook	59.82	125.35	169.44	227.80	582.41
20	Frank L. Chadwick	60.16	118.75	168.32	272.75	620.98
21	Christopher C. Fewel	52.41	114.11	172.71	236.72	575.95
22	Percy N. Olmsted	59.34	115.50	168.70	271.84	615.38
23	Orton P. Jackson	59.10	123.26	165.17	227.40	574.93
24	Peter C. Hains, jr.	57.59	119.76	175.42	217.41	570.18
25	William G. Powell	63.21	116.64	169.46	270.52	620.83
26	Richard S. Douglas	57.25	114.26	170.61	224.94	567.06
27	Frank B. Upham	55.93	120.48	168.62	222.44	567.47
28	John L. Sticht	54.74	114.19	168.58	224.42	561.93
29	John P. J. Ryan	61.69	120.41	167.61	211.14	560.85
30	John R. Morris	55.91	120.27	170.59	211.54	558.31
31	Chester Wells	59.39	121.35	164.41	211.54	556.69
32	Gerald L. Holstinger	54.93	112.41	161.48	222.17	550.99
33	Alfred A. McKethan	54.40	113.14	162.24	220.70	550.48
34	Emmett R. Pollock	60.42	115.49	160.22	211.17	547.30
35	James R. Potter	51.80	108.34	179.67	223.28	563.09
36	Alfred A. Pratt	51.28	109.49	162.96	217.75	541.48
37	Marvin Carver	52.29	112.70	161.79	246.00	572.78
38	André M. Procter	55.74	108.79	155.76	198.70	519.99

Merit-roll, for the four years ending June, 1893, of the Naval Cadets of the Class appointed in 1889, now performing required service afloat—Engineer Division—6 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
*1	Daniel C. Nutting, jr.....	61.39	130.34	198.79	271.01	661.53
2	Maurice B. Pengnet.....	66.52	129.41	184.08	232.41	612.42
3	Henry B. Price.....	55.09	125.18	174.04	235.07	589.38
4	Martin E. Trench.....	55.87	121.92	171.36	236.88	586.03
5	John R. Brady.....	57.68	121.18	166.04	220.32	565.22
6	Frank De W. Read.....	57.31	115.28	168.20	219.43	560.22

Merit-roll, for the four years ending June, 1894, of the Naval Cadets of the Class of 1890, now performing required service afloat—Line Division—34 members.

Order of general merit for four years	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	Total.
	Maxima.....	70	132	224	304	730
1	William P. Robert.....	69.78	141.49	201.90	277.28	730
2	Daniel H. Cox.....	68.79	138.06	202.24	281.77	730
3	Irvine Van G. Gillis.....	66.37	132.75	198.08	277.45	730
4	Thomas G. Roberts.....	70.31	138.61	196.60	245.71	730
5	David F. Sellers.....	65.04	131.28	197.58	252.87	730
6	Lawrence S. Adams.....	59.82	129.59	194.99	246.71	730
7	Raymond Stone.....	60.92	132.41	184.81	256.71	730
8	John T. Tompkins.....	67.89	132.17	189.90	240.47	730
9	Ridley McLean.....	67.23	129.62	192.20	251.28	730
10	Charles Webster.....	65.20	125.67	183.74	261.49	730
11	Provoost Babin.....	64.73	130.86	185.72	244.61	730
12	Winston Churchill.....	63.55	120.16	181.13	246.74	730
13	L. Burton Jones.....	64.37	129.30	167.36	246.48	730
14	Simon P. Fullinwider.....	62.72	127.42	179.17	243.18	730
15	Stephen V. Graham.....	63.12	123.59	160.13	247.22	730
16	Ernest L. Bennett.....	63.66	124.29	171.16	231.43	730
17	John McC. Luby.....	60.04	117.41	171.73	237.83	730
18	Fritz L. Sandoz.....	65.48	122.18	169.30	227.28	730
19	Gilbert S. Galbraith.....	56.09	121.10	170.14	231.92	730
20	Melville J. Shaw.....	66.87	125.11	162.19	223.08	730
21	Arthur G. Kavanagh.....	62.27	118.61	173.38	217.59	730
22	Charles S. Bookwalter.....	57.40	113.80	169.74	229.43	730
23	William P. Scott.....	57.53	113.36	160.72	248.73	730
24	Carlton F. Snow.....	55.44	112.31	167.71	224.72	730
25	Robert H. Osborn.....	59.01	118.15	165.90	225.15	730
26	Roscoe Spear.....	61.07	119.03	163.94	226.74	730
27	Walter J. Manion.....	66.12	116.2	164.18	217.29	730
28	Robert W. McNeely.....	59.65	115.8	167.21	221.73	730
29	Walter S. Turpin.....	54.68	112.18	163.24	240.88	730
30	Roscoe C. Bulmer.....	58.09	115.0	160.52	227.29	730
31	William S. Whitted.....	57.31	111.02	166.58	223.87	730
32	George L. P. Stone.....	56.54	113.30	161.35	224.19	730
33	George E. Gehm.....	51.88	111.66	161.10	221.28	730
34	Clarence England.....	55.85	110.8	154.13	218.72	730

Merit-roll, for the four years ending June, 1894, of the Naval Cadets of the Class appointed in 1890, now performing required service afloat—Engineer Division—13 members.

Order of general merit.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
		76	152	228	304	760
1	John M. Hudgins	61.95	128.30	186.23	251.42	627.90
2	Boling K. McMorris	61.06	121.17	174.23	244.80	601.26
3	Alfred W. Hinds	61.50	123.08	171.57	231.99	588.14
4	Roscoe C. Moody	58.60	118.52	172.62	238.28	588.02
5	Ignatius T. Cooper	62.31	119.44	166.81	232.10	580.65
6	Henry T. Baker	57.50	122.57	168.53	231.25	579.85
7	Ralph H. Chappell	58.40	115.43	171.26	236.17	579.26
8	Leland F. James	61.15	119.63	162.45	235.48	578.71
9	Frank Lyon	56.45	111.45	166.43	228.81	563.14
10	Joseph M. Reeves	55.29	118.73	170.74	217.17	561.93
11	Hutch I. Cone	59.13	115.75	161.42	222.91	559.21
12	Emory Winship	58.84	114.78	159.00	220.70	553.41
13	Edwin H. De Lany	53.96	99.22	150.33	208.06	511.57

Merit-roll of the Naval Cadets of the First Class—Line Division—34 members—Annual Examination, June, 1894.

Order of annual merit	NAME.	Maxima										Discipline	Aggregate
		Seamanship, naval construction, and naval tactics.	Seamanship, practical cruise.	(P)rudence and gunnery.	Navigation and surveying.	Navigation, practical cruise.	Least squares and applied mechanics.	Physic.	International law.	Physiology and hygiene.			
		32	4	60	48	8	20	20	16	8	64	304	
1	William P. Robert	40 15	7 36	55 95	41 88	7 28	17 00	17 70	14 68	7 92	61 44	277 36	
2	Irvin Van G. Mills	44 33	6 94	50 25	42 00	7 36	18 55	17 50	14 08	6 76	59 68	273 45	
3	Daniel M. Cox	45 37	6 98	52 80	37 44	6 00	16 75	17 05	14 08	6 94	58 72	262 73	
4	Lawrence V. Adams	46 54	7 08	51 00	38 28	7 00	17 40	16 20	13 80	6 46	57 44	262 10	
5	Charles Webster	43 94	6 98	53 10	39 60	6 80	14 90	16 55	13 64	7 44	59 04	261 99	
6	Raymond Stone	42 51	7 32	49 80	38 40	7 10	13 35	15 65	14 48	7 28	60 64	256 53	
7	David F. Sellers	44 46	6 58	49 35	36 96	6 18	14 70	16 20	14 12	6 16	58 24	252 95	
8	Hulley McLean	41 60	6 72	52 05	37 08	6 98	15 95	16 70	14 16	7 22	52 80	251 26	
9	John T. Tompkins	42 38	6 22	52 50	37 68	6 52	16 50	17 65	13 20	6 44	51 36	250 45	
10	Thomas G. Roberts	41 00	6 82	47 70	36 36	6 18	15 90	15 35	13 60	6 48	56 80	246 79	
11	L. Barton Jones	42 51	6 46	46 95	35 52	6 80	15 10	15 40	13 56	6 90	57 28	246 48	
12	Provost Babin	42 51	6 64	47 70	34 32	7 04	14 45	16 40	13 76	6 02	55 84	244 68	
13	William P. Scott	38 35	6 72	46 50	35 64	6 12	13 40	14 50	13 76	7 44	56 32	238 73	
14	Stephen V. Graham	40 17	6 70	44 15	36 00	6 14	14 10	15 20	13 80	5 02	51 04	237 22	
15	Winston Churchill	38 35	6 72	46 06	33 60	6 86	14 15	15 35	12 84	5 88	56 96	236 76	
16	John McC. Luby	38 74	6 46	44 90	34 68	5 00	13 26	14 30	12 72	5 72	55 36	235 81	
17	Minum P. Pollinwider	39 00	6 82	45 45	32 04	5 00	14 45	15 10	13 04	5 70	57 24	235 18	
18	Carlton P. Howe	40 60	6 54	46 26	33 84	5 92	12 55	14 35	12 00	5 36	57 12	234 72	
19	Gilbert K. Calbraith	39 65	6 54	48 00	33 60	5 36	12 05	14 25	12 20	6 16	56 52	233 91	
20	Kenneth L. Bennett	40 04	7 08	45 00	34 68	6 50	13 60	15 06	13 16	5 60	50 56	231 67	
21	Walter M. Lippitt	39 56	6 14	44 65	34 96	5 68	11 50	15 08	11 80	5 36	40 16	220 88	
22	Charles M. Brewster	38 18	6 68	6 65	1 16	6 18	1 16	1 16	1 16	5 16	16	1 16	
23	James H. Jones	38 18	6 68	6 65	1 16	6 18	1 16	1 16	1 16	5 16	16	1 16	

24	Fritz L. Sandoz	37.18	6.50	41.55	31.63	6.20	13.75	13.60	14.12	6.14	56.48	227.20
25	Robert H. Osborn	39.00	6.44	45.75	31.56	4.80	13.30	13.50	11.36	5.20	54.24	225.15
26	George L. P. Stone	35.75	6.12	44.10	32.64	5.78	13.25	13.25	12.64	6.74	53.92	224.19
27	William S. Whitted	37.18	5.80	43.05	32.40	5.36	12.95	13.75	11.60	5.92	55.84	223.85
28	Melville J. Shaw	36.79	5.84	40.95	33.00	5.70	13.90	13.80	13.80	6.82	52.48	223.08
29	George E. Gelm	38.09	6.52	41.85	30.96	5.78	12.50	13.10	11.96	5.48	55.04	221.28
30	Roscoe Spear	36.92	6.16	41.70	31.44	5.96	13.65	13.25	11.48	6.42	53.76	220.74
31	Robert W. McNeely	38.22	6.22	42.15	32.76	5.72	12.90	14.80	13.04	6.86	47.68	220.35
32	Clarence England	36.66	6.76	41.25	30.84	6.20	13.60	14.20	12.88	6.00	50.40	218.79
33	Arthur G. Kavanaugh	37.96	6.60	43.65	31.56	6.14	14.30	14.65	12.20	5.80	44.64	217.50
34	Walter J. Manion	36.14	6.60	39.30	31.08	5.70	13.10	13.45	11.48	6.46	54.08	217.39

Merit-roll of the Naval Cadets of the First Class—Engineer Division—1. members.
Annual Examination, June, 1894.

Order of annual merit	NAME.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Discipline.	Average.
		32	14	40	32	20	40	20	8	64	204
		Maximum									
1	John M. Hudgins	24 24	37 20	32 20	26 72	19 47	34 30	15 15	5 12	76 64	25
2	Boling K. McMorris	24 56	36 24	30 40	25 52	18 20	31 90	14 60	5 72	77 76	244
3	Roscoe C. Moody	24 52	35 10	29 40	25 64	18 20	28 20	15 70	6 18	74 84	25 25
4	Ralph H. Chappell	24 72	33 00	28 90	24 16	18 80	25 70	15 35	5 00	59 68	2
5	Leland F. James	24 64	34 32	29 50	23 68	18 50	29 50	15 20	6 10	74 74	2
6	Ignatius T. Cooper	23 84	36 24	29 00	24 52	18 30	28 70	14 50	5 40	72 80	22
7	Alfred W. Hinds	24 72	36 12	30 70	25 84	17 25	32 10	14 10	5 40	65 76	2
8	Henry T. Baker	24 24	34 08	28 90	24 24	18 10	27 00	13 75	5 16	54 88	2
9	Frank Lyon	24 44	35 76	28 50	24 80	17 45	29 00	14 70	5 72	69 44	22 25
10	Hutch I. Cone	23 28	33 24	24 50	24 24	17 95	28 20	14 20	5 46	47 64	22
11	Emory Winship	22 24	31 92	26 20	21 84	18 45	26 50	13 70	5 52	54 56	22
12	Joseph M. Reeves	22 80	31 56	26 90	23 44	17 90	26 30	14 25	5 54	48 68	22
13	Edwin H. De Lany	21 00	31 08	26 40	20 64	17 30	26 70	13 90	5 14	45 60	22 25

Merit-roll of the Naval Cadets of the Second Class—16 members—Annual Examination, June, 1894.

Order of merit.	NAME.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima	12	12	32	12	48	40	12	12	48	228
1	Stuart F. Smith	10.65	10.44	29.12	10.59	43.68	35.90	10.83	11.07	43.92	206.20
2	William G. Groesbeck	10.41	9.45	28.16	9.51	43.20	33.50	10.53	10.95	39.48	195.19
3	Frank H. Brumby	9.42	9.87	23.92	9.60	41.16	31.20	10.11	9.33	43.56	188.17
4	Frank P. Baldwin	10.32	9.96	27.52	10.50	33.24	34.00	9.27	10.95	41.76	187.52
5	Thomas M. Dick	9.54	9.21	27.04	10.50	36.76	30.20	9.51	10.20	43.32	185.88
6	Charles K. Mallory	9.69	8.94	26.48	9.93	37.44	31.40	8.82	9.93	41.52	184.15
7	Harris Laning	10.32	8.91	26.24	10.20	35.04	31.20	8.64	9.48	43.32	183.45
8	Philip M. Bannon	9.60	8.61	24.40	10.71	36.60	29.90	9.06	9.84	43.44	182.16
9	William R. Cushman	8.82	8.49	26.48	10.14	37.56	29.10	8.79	10.77	41.28	181.43
10	Arthur T. Chester	9.48	8.61	25.28	9.60	37.44	28.50	7.83	11.04	43.20	180.98
11	Newton Mansfield	9.96	8.61	26.72	11.13	31.08	28.50	8.91	11.37	43.56	179.84
12	William C. Davidson	9.57	8.58	25.92	11.04	33.72	29.20	9.81	9.99	41.52	179.35
13	Henry V. Butler, jr	10.11	8.43	25.60	9.72	34.32	28.10	8.40	10.14	43.32	178.14
14	Daniel M. Garrison	9.60	8.85	24.64	10.14	33.72	30.20	7.92	10.77	41.64	177.48
15	Samuel C. Vestal	9.51	9.26	23.52	10.56	34.80	29.10	9.00	8.19	42.72	176.76
16	Franklin D. Karns	9.48	9.18	23.76	10.41	32.76	29.00	9.27	10.23	42.48	176.57
17	John R. Monaghan	9.15	8.94	21.08	9.99	34.56	29.20	9.24	8.58	42.00	175.74
18	William H. Staudley	9.60	8.13	23.92	11.01	33.00	29.70	8.19	9.30	42.36	175.21
19	Albion J. Wadhams	9.33	8.40	25.28	10.77	31.44	28.30	8.43	10.68	41.76	174.39
20	Kenneth M. Bennett	9.09	9.03	23.20	9.60	32.52	29.90	9.45	8.85	41.64	173.28
21	Walter R. Gherardi	10.02	8.73	23.60	9.21	31.32	26.80	10.18	10.47	42.60	172.83
22	James J. Raby	8.52	9.12	21.20	10.89	32.16	26.90	9.72	9.63	44.28	172.39
23	Stanley P. Dennett	8.70	8.25	22.64	10.11	33.72	26.70	9.00	9.00	42.48	170.69
24	James E. Walker	9.81	8.31	21.66	11.07	36.48	28.20	9.51	10.17	31.68	170.19
25	David W. Todd	9.84	9.09	22.80	10.08	30.84	26.90	10.26	10.02	39.96	169.70
26	Charles H. Walker	9.09	8.10	22.24	11.19	30.00	25.00	7.74	10.38	43.32	167.06
27	Newt H. Hall	8.31	8.28	22.72	8.94	32.16	27.20	8.79	8.64	42.00	167.04
28	John V. Klemann	9.27	8.25	21.68	9.33	31.32	27.00	9.42	9.75	40.32	166.34
29	Joseph D. Sayers, jr	8.31	8.49	21.28	9.72	33.60	26.30	8.58	8.64	42.00	166.32
30	Frederic N. Freeman	8.67	8.22	24.08	9.78	30.84	25.90	8.10	9.33	41.16	166.14
31	Orlo S. Knepper	8.70	8.34	21.04	9.72	31.32	27.90	8.52	8.70	41.40	165.64
32	James P. Morton	8.67	8.73	23.92	9.66	33.00	27.60	9.42	9.93	34.68	165.61
33	Rufus Z. Johnaton, jr	8.82	8.79	22.68	9.81	30.36	25.40	8.25	9.78	40.20	164.32
34	Edward H. Watson	8.76	8.04	20.80	10.59	30.12	25.60	9.84	9.12	41.40	164.18
35	Walter B. Izard	8.85	7.92	20.08	10.71	30.00	26.20	8.34	8.88	42.36	163.34
36	Jos. C. Breckinridge	8.04	8.73	21.20	9.99	34.12	27.00	9.72	8.10	36.96	162.86
37	Worth Bagley	8.61	8.04	20.96	9.39	31.08	25.20	10.26	8.94	39.72	162.20
38	M. J. McCormack	7.62	7.98	20.56	9.78	30.48	25.10	8.28	8.55	43.44	161.79
39	Ernst F. Eckhardt	7.83	7.62	20.80	9.96	34.44	26.40	7.86	10.32	35.88	161.11
40	Cassius B. Barnes	8.07	8.55	22.80	9.78	32.04	27.20	8.85	9.00	34.44	160.73
41	George H. Mann	8.16	8.16	21.20	9.33	32.04	26.30	9.21	8.28	35.28	157.96
42	Edward H. Dunn	8.49	7.71	20.48	9.99	30.60	25.60	8.23	7.98	38.76	157.89
43	Darwin R. Merritt	7.98	8.28	21.36	10.17	30.60	26.30	7.71	8.55	36.60	157.55
44	John F. Marshall, jr	7.63	7.68	23.44	10.47	30.96	27.20	8.25	10.65	30.48	156.90
45	Harry C. Williams	8.28	8.19	21.28	10.08	24.64	25.40	9.24	8.64	39.36	160.11
46	Motohiko Takasaki	7.77	6.45	15.76	10.53	16.68	14.60	6.60	10.89	41.64	131

b Deficient, continued with the class.

Merit-roll of the Naval Cadets of the Third Class—71 members—Annual Examinations
June, 1894.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Music.	General average.
		Maxima	40	20	16	20	24	22
* 1	Richard H. Robinson	37.00	17.90	14.00	18.05	22.32	22.18	18.00
2	Charles L. Leiper	30.00	16.00	13.24	18.20	22.02	21.12	16.00
3	Charles L. Poor	30.00	16.10	13.48	18.25	21.42	21.18	16.00
4	Jonas H. Hoklen	30.70	15.80	12.88	14.75	23.94	22.48	15.00
5	Ralph Earle	33.70	15.25	12.92	16.65	21.74	22.08	15.00
6	Ralph E. Walker	33.80	15.55	12.24	17.00	20.46	21.24	15.00
7	Thomas T. Craven	32.40	14.80	12.44	15.80	22.86	21.04	15.00
8	Henry O. Bisset	32.60	16.05	12.92	17.20	20.78	22.12	15.00
9	Gatewood S. Lincoln	32.40	15.85	13.88	16.70	17.72	22.36	15.00
10	Andrew E. Kalbach	31.40	15.80	12.84	15.80	18.74	22.36	15.00
11	Wat T. Cluverius, jr	30.00	15.70	13.68	16.20	18.42	22.12	15.00
12	Charles E. Gilpin	27.80	14.30	9.84	19.50	21.96	21.24	15.00
13	Junius H. Jones	33.00	15.35	11.32	12.75	10.78	21.92	15.00
14	Leigh C. Palmer	27.50	12.00	13.20	16.55	22.02	21.92	15.00
15	George I. Middleton	28.90	14.95	13.00	17.00	18.30	21.08	15.00
16	Henry S. Knuball	29.90	14.05	11.48	15.65	20.58	21.48	15.00
17	Ivan C. Wettengel	27.00	15.00	11.68	16.55	17.58	22.08	15.00
18	Edward T. Fitzgerald	28.60	14.15	12.00	14.05	21.12	21.08	15.00
19	Charles M. Tozer	30.20	14.70	12.44	13.90	18.48	22.12	15.00
20	Frank E. Ridgely	26.40	14.25	12.16	16.30	20.10	22.38	15.00
21	Daniel W. Wurtabaugh	29.80	13.90	11.76	13.55	17.94	21.38	15.00
22	Arthur MacArthur, jr., jr	27.20	13.35	11.92	13.75	19.86	21.48	15.00
23	Mark St C. Ellis	27.20	15.00	11.52	15.15	19.22	22.16	15.00
24	Thomas A. Kearney	27.00	13.60	12.08	13.75	20.70	21.12	15.00
25	Dudley W. Knox	26.80	13.85	10.66	12.95	21.72	21.78	15.00
26	Duncan M. Wood	28.40	14.30	11.60	13.05	21.48	24.24	15.00
27	Albert W. Marshall	26.70	14.45	10.64	13.45	19.92	21.12	15.00
28	Edward McCauley, jr	26.00	13.00	10.04	14.65	19.92	22.12	15.00
29	Henry C. Mustin	25.80	13.45	10.40	13.15	24.18	21.78	15.00
30	John H. Royce	25.70	13.40	11.76	15.55	19.58	23.28	15.00
31	Richard G. McConnell	25.50	13.90	11.64	13.40	19.86	22.52	15.00
32	Earl P. Jessop	25.00	14.05	11.64	14.10	17.58	21.08	15.00
33	Kenneth G. Castleman	25.60	16.00	10.96	14.45	19.98	22.08	15.00
34	Charles P. Burt	26.10	13.20	10.60	13.95	19.50	22.12	15.00
35	George B. Rice	29.20	13.05	10.96	11.85	17.40	24.08	15.00
36	George J. Haunstein	25.20	13.15	11.00	11.20	18.50	21.68	15.00
37	Roland I. Curtin	26.70	12.80	11.24	12.80	19.86	24.12	15.00
38	Pope Washington	26.30	13.95	10.68	13.30	17.52	24.18	15.00
39	Edwin C. Blandy	25.40	13.20	11.44	13.25	16.98	23.72	15.00
40	James B. Henry, jr	25.70	13.05	10.68	13.45	18.84	22.08	15.00
41	Russell A. Deane	25.00	14.05	11.12	13.05	15.24	21.08	15.00
42	Arthur Crenshaw	25.70	12.20	10.12	12.70	16.26	21.72	15.00
43	Amos Bronson, jr	27.00	13.05	10.28	13.15	15.42	21.12	15.00
44	Henry M. Deak, jr	25.20	13.05	10.76	12.50	16.02	21.08	15.00

Merit-roll of the Naval Cadets of the Third Class—51 members—Annual Examination, June, 1894—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish and German.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima	40	20	16	20	24	32	152
†	Walter S. Volkmar	24.80	12.50	10.60	13.10	21.72	27.04	109.76
†	William L. Littlefield	24.90	13.25	11.04	12.75	22.02	24.00	107.96
d. d.	Paul E. Taussig	26.20	11.75	9.88	12.50	19.08	27.12	106.53
†	Robert P. P. Cooke	25.50	11.80	10.68	15.20	15.96	24.08	103.22
§ r	James M. Love, jr.	25.50	12.00	10.04	12.00	16.56	22.64	98.74
§ r	John J. Bryant, jr	20.80	9.15	10.24	11.70	17.52	22.64	92.05
§ r	Walter A. Wiley	18.20	9.60	10.84	11.90	16.02	23.28	89.84

d. d. Died July 23, 1894, at the navy-yard, New York, while attached to the U. S. practice-ship Bancroft.

Merit-roll of the Naval Cadets of the Fourth Class—77 members—Annual Examination June, 1894.

Order of annual merit	NAME	Algebra and geometry.	English and history	French, Spanish, and German	Thesopline	Aggregate
	Maxima.....	20	20	20	10	70
1	William G. Du Boer.....	18.50	18.40	18.05	15.00	70.00
2	Fletcher L. Sheffield	17.05	17.10	18.40	14.50	67.05
3	Arthur J. Hepburn	16.70	16.85	17.95	12.00	63.50
4	Harry E. Tarnell	16.45	17.05	16.05	14.50	64.05
5	Harlan P. Perrill	17.15	17.65	16.05	12.00	62.85
6	Joseph W. Powell	17.10	17.15	15.85	14.00	64.10
7	Daniel S. Mahony	16.45	17.60	16.50	13.00	63.55
8	Needham L. Jones	14.40	17.05	17.95	11.00	60.40
9	Victor S. Houston	14.30	14.30	19.00	14.20	61.80
10	Alfred W. Pressey	15.05	16.05	17.30	14.12	62.52
11	Leonard R. Sargent	15.05	17.65	15.95	11.70	60.35
12	Cyrus R. Miller	15.60	15.65	17.25	13.00	61.50
13	Ernest F. Eggert	15.65	16.60	16.25	13.70	62.20
14	David E. Thibsen	16.20	16.70	14.00	11.90	60.80
15	Henry R. Herndon	14.55	17.05	16.00	13.00	60.60
16	Joseph W. Graeme	14.40	17.15	16.55	14.00	62.10
17	Henry L. Collins	17.10	14.65	15.00	13.70	60.45
18	Frederic R. Holman	14.40	15.85	16.20	11.80	60.25
19	Robert C. Bagby	12.05	15.80	17.55	11.80	57.20
20	Alfred C. Owen	14.55	15.55	16.20	11.80	58.10
21	Austin Kautz	14.85	14.50	16.85	11.80	58.00
22	William H. Reynolds	14.55	15.85	15.65	11.80	58.85
23	Gilbert Chase	13.95	15.55	16.30	11.70	57.50
24	John A. Day	15.20	14.35	18.00	12.00	59.55
25	Orin C. Murfin	15.25	15.60	14.15	14.40	59.40
26	William R. White	14.05	15.65	16.55	12.70	59.00
27	Joseph D. Terry	14.55	15.30	16.00	14.20	59.05
28	Peter L. Pratt	14.55	15.55	16.65	12.20	59.00
29	Henry Williams	14.70	15.45	14.60	13.80	58.55
30	Luther M. Overstreet	15.85	14.70	13.45	14.50	58.50
31	David F. Boyd	16.00	16.15	15.40	10.00	57.55
32	Irwin F. Landis	15.60	15.20	13.75	11.60	56.15
33	Frederic C. Keenan	14.60	15.05	14.10	13.90	57.65
34	Cotton C. Rundle	14.75	14.85	14.85	13.90	58.35
35	Edward I. Hoopes	17.50	14.05	14.05	12.80	58.40
36	Charles T. Owens	14.10	15.65	14.30	12.20	56.25
37	Charles J. Naylor	13.00	14.15	15.80	11.90	54.85
38	George C. Richardson	15.15	14.00	13.05	11.70	53.90
39	William McDowell	14.70	14.75	13.70	14.00	57.15
40	William R. Sexton	14.05	15.00	11.80	11.80	52.65
41	George D. Deegan	14.50	14.65	13.05	14.00	56.20
42	Frederic C. Hart	14.80	14.10	14.50	11.60	55.00
43	William C. Anderson	14.05	14.15	15.15	13.50	56.85
44	Walter M. Falconer	14.15	14.80	14.15	13.70	56.80

Merit-roll of the Naval Cadets of the Fourth Class—77 members—Annual Examination, June, 1894—Continued.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Aggregate.
		20	20	20	16	76
	Maxima					
45	George Webber	13.30	14.35	14.20	13.88	55.73
46	Arthur St. C. Smith, jr.	13.50	14.50	13.15	14.00	55.15
47	Eugene O. Sykes, jr.	13.20	14.30	14.55	13.08	55.13
48	Robert W. Henderson	13.05	14.60	13.30	13.80	54.75
49	Joshua T. Ward	13.30	13.50	13.10	14.72	54.62
50	John F. Hilleary	13.95	13.00	13.45	13.60	54.60
51	Stanley H. McMullen	12.95	13.45	13.85	14.00	54.25
52	Nathan J. Shelton	12.75	12.90	15.00	13.52	54.17
53	Andrew T. Graham	13.20	13.50	13.05	14.16	53.91
54	Samuel G. Magill, jr.	12.90	13.35	14.05	13.48	53.78
55	William D. Leahy	12.95	13.95	13.45	13.40	53.75
56	Albert H. McCarthy	13.45	13.80	12.85	13.56	53.66
57	Arthur L. Wessels	14.40	13.90	13.20	12.08	53.58
57	Henry N. Jenson	12.85	14.15	12.50	14.08	53.58
59	George Van Orden	13.05	13.40	13.55	12.28	52.88
60	Henry W. Mayo	12.70	13.35	13.55	11.08	50.68
†	John W. Morse	12.40	14.90	17.15	13.80	58.25
†	William N. Jeffers	12.10	14.30	18.05	12.48	56.93
†	Samuel W. Bryant	11.95	13.95	14.80	13.32	54.02
†	Richard J. Oglesby, jr.	11.90	13.05	15.05	13.88	53.88
†	Grant Green	12.10	13.55	13.70	14.08	53.43
†	Horace T. Wells	13.00	13.50	12.30	14.16	52.96
†	Clarence S. Kempff	11.95	13.75	13.10	13.84	52.64
†	William P. Giles	13.10	13.55	11.05	14.28	52.58
†	Sheldon W. Anding	13.25	11.00	12.70	13.88	51.73
†	Dilly N. Pattison	12.45	12.75	12.15	13.64	50.90
†	Hugh K. Taylor	11.55	13.30	11.95	14.08	50.88
†	Yancey S. Williams	12.00	12.25	11.95	13.60	49.80
†	Douglas C. McDougal	11.95	12.20	12.35	12.96	49.46
†	William T. Tarrant	10.80	14.05		13.80	
s	Benjamin L. Brockway					
s	George Brown, jr.					
Pr	Trevor W. Leutze					

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and *act of Congress approved August 5, 1882.*)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and *act of Congress approved June 17, 1878.*) *Provided, however,* That there shall not be at any time more in said Academy appointed at large than ten.—(*Act of Congress approved August 5, 1882.*)

III. The course of naval cadets is six years.—(*Rev. Stat.*, § 1520.) Four years at the Naval Academy and two years at sea, at the expiration of which time the cadet returns to the Academy for final graduation, and the district then becomes vacant.

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the naval cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. *At least* fifteen appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for naval cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but if it is not made by that time the Secretary of the Navy shall fill the vacancy by appointment of an actual resident of the district in which the vacancy exists, who shall have been for at least two years immediately preceding the date of his appointment an actual and bona fide resident of the district in which the vacancy exists and of the legal qualification under the law as now provided. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President.—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. *And all candidates must, at the time of their examination for admission, be between the ages of fifteen and twenty years and physically sound, well-formed, and of robust constitution.*"—(*Rev. Stat.*, § 1517.)

* Act 2d March, 1889.

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examination.

No leave of absence will be granted to Cadets of the fourth class.

EXAMINATION.

VIII. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat. § 1515.*)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat., § 1516.*)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy at the Naval Academy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz:

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition;

Any disease, deformity, or result of injury that would impair efficiency, such as—

Weak or disordered intellect;

Contagious or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense; visual acuteness must not fall below fifteen twentieths of the normal in either eye;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia, complete or incomplete, or undescended testis;

Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions, or other deformity of feet;

Loss of many teeth, or teeth generally unsound.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, whether abstract or concrete, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the test of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed, *e. g.*:

“They were always a strange family; they rarely acted like other people; their heads were in the right place, but their heads always seemed to be doing anything but what

ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind of case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus—

Strange is a descriptive adjective, positive degree. It qualifies the noun *familiar*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected thus—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *It is sweetly their voices sound.* 3. *Try and do as you was told!* 4. *I should have liked to have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the location of the higher peaks; the position and course of the principal rivers, their tributaries and the bodies of water into which they flow; the position of important seas, bays, gulfs, and arms of the sea; the position of independent States, their boundaries and capital cities; the position and direction of great peninsulas, and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and of colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well-known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other States, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the *general character* as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What did the colony of Pennsylvania include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz:

One dress jacket.....	\$20.50	One jackknife.....	\$0.85
One blouse.....	11.50	Six sheets.....	3.45
Two pairs trousers.....	22.00	Hammock clews.....	.58
Two working suits.....	1.90	One pair of bathing trunks.....	.20
One overcoat.....	23.00	Three pairs white thread gloves .	.75
One rubber coat.....	4.00	Two black silk neckties.....	.40
One rubber hat.....	.60	Two clothes bags.....	.46
Two pairs of regulation leggins..	1.50	One hammock mattress.....	3.00
One parade cap.....	2.60	a One requisition book.....	.40
One knit cap.....	.66	a One pass book.....	.40
One mug.....	.10	a Stencil, ink, and brush.....	.45
One soap box.....	.65	a One bottle of indelible ink.....	.18
One laundry book.....	.34	a One wash basin and pitcher....	.88
One pair of blankets.....	2.90	a One pair of gymnasium slippers.	1.10
Two pairs of high shoes.....	6.80	* One whisk.....	.15
One pair of overshoes.....	.72	* One coarse comb.....	.10
Eight white shirts.....	4.40	* One cake of soap.....	.10
Twelve linen collars.....	1.68	* One hairbrush.....	.55
Eight pairs of cuffs.....	2.00	* Stationery.....	.50
* Eight pairs of socks.....	1.84	* Twelve white handkerchiefs...	2.52
* Eight towels.....	1.84	* One pair of suspenders.....	.40
* Shaving outfit.....	1.61	* Four nightshirts.....	2.52
* Four pairs of drawers (winter).	4.32	* One toothbrush.....	.21
b Four pairs of drawers (summer).	1.60	* Thread and needles.....	.19
* Four undershirts (winter).....	4.32	* Blacking brush and blacking...	.66
b Four undershirts (summer).....	1.60	* Nailbrush.....	.25
One hand glass.....	.36		
			<hr/>
			21.25
	<hr/>		
	125.34		

When moving into cadet quarters, cadets will supply themselves with the following articles, viz:

a Two bedspreads.....	\$2.40	One mirror.....	\$1.10
a Two pairs of drill gloves.....	1.10	a One rug.....	1.00
a One slop jar.....	.88	a One hair mattress.....	5.25
a Two spatter cloths.....	.66	a One broom.....	.29
One hair pillow.....	.75	Six pillowcases.....	1.38
			<hr/>
	<hr/>		9.02
	5.79		

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship, viz:

Three working suits	\$2.85	One pair rubber leggins	\$1.00
Four woolen shirts	8.20	One pair high shoes	2.00
Three white sailor hats	1.20	One knit cap .....	.60
	<hr/>		<hr/>
	12.25		4.60

Articles marked *a* will not be taken on board the practice ship.
Of the articles marked *b*, cadets entering in September must have four each.
The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.
Each naval cadet must, on admission, deposit with the pay officer the sum of \$20 for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.
All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$17.50
Deposit for books, etc	2.50
	<hr/>
Total amount required	\$20.00

The value of clothing brought from home is to be deducted from this amount.
Each naval cadet one month after admission will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution; arithmetical, geometrical, and harmonical progression.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Wentworth's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language, syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: "Natural method of teaching languages."	Chardenal's Complete French Course. Marion's Le Verbe en quatre Tableaux Synoptiques. Termes Nautiques Pornain. Bellow's Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Mathematics.	3	4	ALGEBRA. Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; theory of probability; summation of series, continued fractions, logarithms, exponential equations, theory of equations, including the solution of numerical equations; determinants.	Hall and Knight's <i>Elementary Algebra</i> . Bowditch's <i>Useful Tables</i> .
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Wentworth's <i>Geometry</i> .
English Studies, History, and Law	2	4	ENGLISH: Rhetoric and composition, choice and use of words, kinds of composition, narration and description; argumentative composition, exercises in the composition of letters and telegrams. Themes.	A. S. Hill's <i>Rhetoric</i> . Ayres's <i>Orthoepia</i> . Ayres's <i>Verbalist</i> . Webster's <i>Dictionary</i> .
	3	4	HISTORY: Progress of colonial development in America and the history of the United States, important points in the naval history of the United States by notes or lectures.	Elliot's <i>History of the United States</i> . Mitchell's <i>Atlas</i> .
Modern Languages.	5	4	FRENCH: "Natural Method."	Herry's <i>La Langue Française</i> 1 ^{re} partie. Herry's <i>French</i> 1 ^{re} année. Hollow's <i>Dictionary</i> .
			SPANISH: (Given as an advanced course.) Natural Method	Worman's <i>First Series</i> . Book. Knapp's <i>Spanish Grammar</i> . Squire's <i>Dictionary</i> . Dreyfus's <i>Conversative Method and German Verb Drill</i> .
			GERMAN: (Given as an advanced course.) Natural Method	Wendehack und Grosse's <i>Deutsch Grammatik</i> . Whitney's <i>Dictionary</i> .

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections, representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order; projections of the sphere.	Church's Descriptive Geometry. Hendrickson-Dressel's Stereographic projection. Rittenhouse's Exercises in Descriptive Geometry Drawing.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle and the measurements of heights and distances.	Chauvenet's Trigonometry. Levett and Davison's Plane Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People. Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verbalist.* Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Modern Languages.</i>	3	4	FRENCH: "Natural method." SPANISH: (Given as an advanced course.) "Natural method." GERMAN: (Given as an advanced course.) "Natural method."	Böcher's Series of French Plays. Bercy's La Langue Française, 2 ^e partie. Guerres Maritimes Jurien de la Gravière. Bellows's Dictionary.* Knapp's Spanish Grammar. Dreyspring's Cumulative Method and German Verb Drill. Wenckebach und Schrakamp's Deutsche Grammatik. Jeffcott and Tossell's German Newspaper Reading Book. Whitney's Dictionary

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department	Number of recitations a week.	Number of months.	Subjects.	Text-books
<i>Mechanical Drawing.</i>	4	4	MECHANICAL DRAWING. Sketching from models, the use of instruments; construction of scales; notation and symbols used in mechanical drawings, construction of rectilinear and curved figures to scale, drawing section lines, round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Tomkins's <i>Mechanical Construction.</i> Rittenhouse's <i>Exercises in Descriptive Geometry. Drawing</i>

SECOND TERM.

<i>Physics and Chemistry.</i>	5	4	PHYSICS. An elementary course is intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory, experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures. CHEMISTRY. Recitations in general and organic chemistry. Practical work in the chemical laboratory, experiments illustrating the daily recitations and the determination of simple salts, acids and bases. Lectures.	Daniell's <i>Principles of Physics</i> <i>Practical Physics</i> by Stewart and Cow Remond's <i>General Chemistry</i> Remond's <i>Organic Chemistry</i> Lecture Notes
<i>Mathematics</i>	5	4	ANALYTICAL GEOMETRY. Equations of the straight line and of the conic sections. Transformation of coordinates. Properties of the conic sections, equations to tangents and normals, determination of loci. Discussion of the general equation of the second degree, equations of the plane, of lines in space, and of surfaces of the second order. The principal properties of surfaces of the second order. Discussion of the general equation of the second degree in three variables.	C. Smith's <i>Conic Sections</i> Abell's <i>Solid Geometry</i>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	2	4	<p>FRENCH: Course of the first term continued.</p> <p>SPANISH: Course of the first term continued.</p> <p>GERMAN: Course of the first term continued.</p>	Same as for the first term.
<i>Mechanical Drawing.</i>	3½	4	<p>MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.</p>	<p>Tomkin's Machine Construction.*</p> <p>Rittenhouse's Exercises in Descriptive Geometry Drawing.</p>

THIRD YEAR—SECOND CLASS.

FIRST TERM

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Seamanship, Naval Construction, and Naval Tactics.	1	4	SEAMANSHIP. Use of the compass, lead, and log; sails, blocks and tackles, running rigging; description and use of sails and their fittings; purchasing weights; boats and their management; ground tackle; handling anchors; handling sails; port drills and evolutions; management under all duties of naval cadets; rules of the road.	Luce's Seamanship; Department circulars.
Steam Engineering.	3	4	PRINCIPLES OF MECHANISM: Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers, comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention, types of marine engines, including condensers and pumps with explanation of the use of all the parts—screw propellers and paddle wheels, the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Complete Elements of Mechanism Smyth's Marine Steam Engine. Howe's Notes and Problems in Elements of Mechanism
Mechanics and Applied Mathematics.	5	2	DIFFERENTIAL CALCULUS: Functions, rates, differentials of functions in determinate forms, series, maxima and minima, geometrical applications, functions of two or more variables.	Blair and Johnson's Differential Calculus
	3	2	INTEGRAL CALCULUS: The methods of integration, definite integrals, quadrature of surfaces, cubature of volumes, rectification of curves, centers of gravity, moments of inertia, plane meters, rules for the approximate determination of areas and volumes, differential equations.	Johnson's Integral Calculus. Johnson's Indeterminate Equations

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrausch's Physical Measurements. Lecture notes.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Jurien de la Gravière's Guerres Maritimes. Bellows's Dictionary.* Langage Marin, Anglais-Français.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction.*

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coördinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	Young's General Astronomy. Bowditch's Navigator. American Ephemeris and Nautical Almanac.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Steam Engineering	3	4	Course of the first term continued	Same as for the first term
Mechanics and Applied Mathematics	3	4	MECHANICS: Kinematics; dynamics; kinetics hydromechanics; the motion of projectile; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Johnson's Mechanics. Bowser's Hydraulics.
Physics and Chemistry.	4	4	Physics Recitations in light and heat concluded. Electricity and magnetism commenced Practical work in the physical laboratory, calibration of thermometers determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity	Same as for the first term. Thomson's Electricity and Magnetism Ayrton's Practical Electricity Day's Exercises in Electrical Measurements. Lecture Notes.
Modern Languages.	1	1	French Reading French newspapers, and conversation on subjects of the day, themes and written translations	Same as for the first term and French exercises

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship Naval Construction, and Naval Tactics.	3	4	<p>SEAMANSHIP: Stowage and organization; boats and their management; ground tackle; handling anchors; handling sails; management under sail and under steam; turning and maneuvering; wharfing, docking, towing, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; use of sounding machine.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship; section and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamanship.</p> <p>Department Circulars.</p> <p>Navy Regulations.</p> <p>Special Notes and Drawings.</p> <p>Navy Department Pamphlets.</p> <p>White's Manual of Naval Architecture.</p> <p>Welch's Text-book of Naval Architecture.</p> <p>Navy and International Signal Books.</p> <p>Fleet Drill Book (Navy Department).</p>
Ordnance and Gunnery.	3	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors that arise in practice at sea.</p>	<p>Accuracy and Probability of Fire (Naval Academy publications).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Ordnance and Gunnery—Continued.	3	4	<p>INFANTRY AND ARTILLERY TACTICS: As applied to the handling of naval forces on shore.</p> <p>GUNNERY: The motion of projectiles in a nonresisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them, the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Instructions for the and Artillery States Navy Text-book of and Gunnery Academy pub. Exterior Ballistics Academy p tion) Ordnance Notes Naval Inst. Eng.</p>
Astronomy, Navigation, and Surveying.	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems, determination of meridian distances.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying—tidal observations, current observations, sailing directions, the form of the earth, with special reference to the construction of charts, projections, running surveys.</p>	<p>Chauvenet's and Practical omy. Walker's Navigation Howditch's Navigation American and Navigation Phelps's Practical rime Surveying Projection Tables Craig's Azimuth</p>
Mechanics and Applied Mathematics.	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors—fundamental principles of the theory—practical methods and formulas; independent observations, conditioned observations.	Johnson's Method of Least Squares
	3	3	APPLIED MECHANICS: Elasticity; stress and strain, theory of structures—strength and deflection of beams, beams of uniform resistance.	<p>Cottrell and Lessons in Mechanics Cottrell's Applied Mechanics.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Physics and Chemistry.	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy, testing cables and electric light wires; experiments upon induction; practice in photography and micro-photography.	Same as for the second class year. Thompson's Dynamo Electric Machinery. Lecture Notes.

SECOND TERM.

Seamanship, Naval Construction, and Naval Tactics.	4	4	Course of the first term continued.	Same as for the first term.
Ordnance and Gunnery.	5	4	GUNNERY: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine guns afloat and on shore; landing of seamen and marines. ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.	Text-book of Ordnance and Gunnery (Naval Academy publication). Gunnery Drill Book for the New Armaments. (Bureau of Navigation publication.) The Elastic Strength of Guns (Naval Academy publication). Interior Ballistics (Naval Academy publication). Nomenclature of steel B. L. R. guns and carriages, and mounts for Hotchkiss guns. (Bureau of Ordnance.)

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued
SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Ordnance and Gunnery—Continued.	3	4	GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control. AMMUNITION: Its preparation and use.	
Astronomy, Navigation, and Surveying.	4	4	THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling errors. PRACTICAL NAVIGATION. PRACTICAL SURVEYING.	Krass's Elements of Navigation Manual for the determination of the position of the ship in Iron Ships. Howell's Mathematics Theory of the determination of the position of the ship Diehl's Practical Navigation and the determination of the position of the ship in the United States Navy.
English Studies, History, and Law.	2	4	INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retaliation; blockade contraband of war, right of search, ship's papers and nationality; prizes; privateering; piracy, the rights and duties of neutrals jurisdiction over vessels at sea and in territorial waters fugitives and deserters; licenses to trade; recaptures.	Glass's Marine International Law Woolsey's International Law
	1	4	SPECIAL INSTRUCTIONS: General description of the human body and its functions the arrest of hemorrhage; resuscitation from drowning, alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction, Fridays 7.30 to 9.30 p. m. additional.)	Martin's The Human Body and its Functions of Narcotics

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	2	4	<p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.</p>	<p>White's Manual of Naval Architecture.</p> <p>Thearle's Naval Architecture.</p> <p>Welch's Text-book of Naval Architecture.</p> <p>Special Notes and Drawings.</p>
<i>Steam Engineering.</i>	3	4	<p>MARINE ENGINES: General description of modern marine engines and their dependencies; expansion of steam; piston speed and size of cylinders; uses and construction of parts of a marine engine; calculations on twisting and bending moments; principles and construction of condensers and pumps; types of valves and valve gear, and valve diagrams; principles and construction of various types of propellers; the indicator and its diagrams; power of an engine and calculations relating thereto; lectures on the metallurgy of iron and steel; the production of bronzes and alloys with reference to their use in marine engineering.</p> <p>Objects of test trials; boiler trials and their results; friction of the engine and the dynamometer; standard methods and examples of engine trials.</p>	<p>Seaton's Marine Engineering.</p> <p>Thurston's Engine and Boiler Trials.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued

Department	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Steam Engineering—Continued.	2	4	BOILERS: Various types and efficiency of steam boilers; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers; fuels, solid and liquid; combustion of, with the methods of their application under natural and forced draft, their comparative qualities and properties, with instructions as to their selection for, and care of, as steam fuels; practical tests of the calorific value of fuels.	Shook's Steam Boilers Stromeyer's Marine Boiler Management and Construction
	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected, and the resistance offered to these strains; relative value of materials used in machinery as to cost and strength; testing materials; principles and considerations governing the design, drawing, specifications, and proportions of the various parts of engines and boilers, with practical application in the designing room.	Cunwin's Elements of Machine Design—Parts I and II Shook's Steam Boilers
Mechanics and Applied Mathematics.	3	4	Same as for the line division.	Same as for the line division.
Physics and Chemistry	3	4	Same as for the line division.	Same as for the line division.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	3	4	Course of the first term continued.	Same as for the first term.
<i>Steam Engineering.</i>	3	4	MARINE ENGINES: Course of the first term continued. Physical properties of steam; convertibility of heat and work; theory of the steam engine; air and heat engines; efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction, and reëvaporation; experiments on the steam engine and the methods of determining its efficiency.	Seaton's Marine Engineering. Thurston's Engine and Boiler Trials. Cotterill's Steam Engine Considered as a Heat Machine.
	3	4	BOILERS: Course of the first term continued.	Same as for the first term.
	3	4	DESIGNING MACHINERY: Course of the first term continued.	Same as for the first term.
<i>Mechanics and Applied Mathematics.</i>	3	4	APPLIED MECHANICS: Kinematics and dynamics of machines; transmission and conversion of energy by fluids.	Cotterill's Applied Mechanics. Cotterill and Slade's Lessons in Applied Mechanics. Bowser's Hydromechanics.
	4	4	SPECIAL INSTRUCTION: Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics					1	1	3	4	2	3
Ordnance and Gunnery							3	3		
Astronomy, Navigation, and Surveying						2	4	4		
Steam Engineering					3	3			3	3
Mechanics and Applied Mathematics					5	3	3		3	3
Physics and Chemistry				5 F	4	4	3		3	
Mathematics	6	5	5	5						
English Studies, History, and Law ..	5	5	4					2		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing			1	3½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics								½ F		½ F
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F Friday 7:30 to 9:30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying				M. (3), W. F. S. (1)	
English Studies, History, and Law	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)			
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. W. Th. F. (3)	T. (3), S. (1)		
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (7:30 to 9:30 p. m.) [*]		
Ordnance and Gunnery				T. Th. (2), F. (3)	
Physics and Chemistry			T. W. Th. F. (2)	M. T. Th. (1)	M. T. Th. (1)
Seamanship, Naval Construction, and Naval Tactics					T. W. (3)
Steam Engineering			M. (3)	T. W. Th. (3)	{ W. F. S. (1), T. Th. (2), M. Th. F. (3).

SECOND TERM.

Astronomy, Navigation, and Surveying			M. T. (3)	M. T. Th. F. (1)	
English Studies, History, and Law	M. T. W. Th. F. (3)			W. (1), F. (2)	
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. (1), T. F. (3), S. (1) †			T. Th. F. (2)
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		
Modern Languages	M. T. W. Th. F. (2), S. (1) †	W. Th. (3)	S. (1) †, F. (7:30 to 9:30 p. m.) [*]		
Ordnance and Gunnery				M. T. W. Th. (2), F. (3)	
Physics and Chemistry		{ M. (3), T. W. Th. F. (1), F. (7:30 to 9:30 p. m.) [*] }	M. T. Th. F. (2)		
Seamanship, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			W. Th. F. (3)		{ M. T. W. Th. F. (1), M. W. (2), T. F. (3).
Special Instruction (Physiology and Hygiene).				S. (1) † F. (7:30 to 9:30 p. m.) [†]	S. (1) † F. (7:30 to 9:30 p. m.) [*]

^{*} Lectures and practical instruction.

† Saturday period, second term, from January 31 to March 10.

TABLE OF COEFFICIENTS.

DEPARTMENT AND SUBJECTS.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation line division.	Maxima for final graduation engineer division.
Discipline	4	4	12	16	16	160	160		
Seamanship, Naval Construction, and Naval Tactics.									
Seamanship, Naval Construction, and Naval Tactics*			3	12	8		44	28	
Practice Cruise				2		72			
Ordnance and Gunnery.									
Ordnance Instructions, Infantry Tactics, and Gunnery				151		60		44	
Ordnance and Gunnery									
Astronomy, Navigation, and Surveying.									
Astronomy, Navigation, and Surveying			3	12			12	44	
Practice Cruise				2		64			
Steam Engineering.									
Steam Machinery, Marine Engines, and Boilers ..			4					28	
Summer Practical Work			3		5	44			
Marine Engines ..					10				
Designing Machinery					12				
Boilers ..					4		144		
Mechanics and Applied Mathematics.									
Differential and Integral Calculus, and Mechanics			12						
Least Squares and Strength of Materials				3	5	6			
Mechanics					3		24		
Physics and Chemistry.									
Chemistry and Physics		5							
Physics			10	5	5	20	20		
Mathematics.									
Algebra and Geometry	3								
Trigonometry, Analytical Geometry, and Descriptive Geometry		10				60	60		
English Studies, History, and Law.									
English and History	5								
English and Law		4					24		
International Law				4		24		24	
Modern Languages.									
French, Spanish, and German	3	3	3			32	32	28	28
Mechanical Drawing.									
Mechanical Drawing ..		6	2			24	24		
Miscellaneous.									
Special Instruction (Physiology and Hygiene) ..				2	2	4	4		
Cruise Report								16	16
Navigation Note Book, Journals, and Station Bills ..								4	4
Maxima for each class ..	76	112	224	304	704	700	700	240	240

* Seamanship and Naval Tactics for line division alone.
† In making up the standing for a year the second term is given double the weight of the first.
‡ Navigation note books for line division alone.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

Setting up drill; school of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, boat guns, and machine guns; target practice with small arms; target practice afloat with machine guns, boat guns, rapid-fire guns, and great guns; smallsword exercise; broadsword exercise; bayonet exercise; cane exercise; handling and firing torpedoes; handling and preparing fuses for use; determination of the strength and elasticity of gun metal with testing machine; determination of muzzle velocities with the Schultz and Boulanger chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; the preparation and inspection of ordnance material.

Six medals are awarded annually for marksmanship; gold, silver, and bronze medals to the cadets of the first class, as first, second, and third prizes, respectively, for excellence in great-gun practice; and gold, silver, and bronze medals to the cadets of the second class, as first, second, and third prizes, for excellence in practice with the service rifle and revolver.

In June, 1894, the medals for excellence in great-gun practice were awarded as follows:

Gold medal to Cadet W. P. Scott, of Pennsylvania.

Silver medal to D. H. Cox, of New York.

Bronze medal to C. F. Snow, of Maine.

The medals for small-arm marksmanship were awarded in accordance with the result of a rifle match which took place in June, 1894, the competitors in which had won the right to shoot by qualifying during the practice at the several ranges of 100, 200, 400, 500, and 600 yards, with scores of 80 per cent or over of the possible maximum at each range. There were twenty-one competitors in the final match, the conditions of which were ten shots at each of the ranges of 200, 500, and 600 yards, and six shots with the revolver at each of the ranges of 20, 30, and 40 yards. Regulation targets were used, and the revolver score was given one-fourth weight.

The medals were awarded as follows:

Gold medal to W. S. Volkmar, of Pennsylvania.

Silver medal to C. M. Tozer, of New York.

Bronze medal to K. G. Castleman, of Kentucky.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying, and constructing a chart of, a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from the

observations finding the approximate and the exact coefficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Shopwork:

The Pattern Shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining etc. to finished pattern work.

The Foundry: Iron and brass castings; the making of bronzes, alloys, etc.

The Blacksmith Shop: Forging, welding, etc.; tempering, case hardening, etc.; bending and quenching tests of metals.

The Boiler Shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The Machine Shop: Vise bench work, machine tool work, including the setting of work, turning, planing, boring, slotting, etc.; pipe fitting; building, erecting and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Shipwork:

Management of main and auxiliary engines: Getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water-tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while manœuvering at sea; determining the condition and locating defects in machinery while in motion; cause and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under backed fires; coming to anchor; overhauling machinery, cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary Casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burnt grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in Battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Instruments: Use of slide rule, averaging machine, apparatus for testing oil and smoke gases; standardizing steam gauges and indicators.

Miscellaneous: Preparing specifications for purchase of machinery and stores, testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week, the number of each exercise is indicated by a figure in parentheses.

FIRST CLASS.

Aca- demic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Target, great guns (4). Seamanship (1).	Field artillery.	Steam tactics (4). Seamanship (1).
	2	Field artillery.	Steam tactics (4). Battery drill (1).	Company.	Target, great guns (4). Battery drill (1).
	3	Target, great guns (4). Seamanship (1).	Company.	Steam tactics (4). Seamanship (1).	Field artillery.
	4	Steam tactics (4). Battery drill (1).	Field artillery.	Target, great guns (4). Battery drill (1).	Company.
Nov.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	2	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	4	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
Jan.....	1	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	2	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	4	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.

SEMI-ANNUAL EXAMINATION. No Drills.

Feb.....	1	Steam.	Seamanship.	Practical electricity.	Sword exercise.
	2	Practical electricity.	Sword exercise.	Steam.	Seamanship.
	3	Seamanship.	Steam.	Sword exercise.	Practical electricity.
	4	Sword exercise.	Practical electricity.	Seamanship.	Steam.
Mar.....	1	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (1). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	2	Target, great guns (4). Battery drill (1).	Steam tactics (4). Seamanship (1).	Skirmish (4). Battery drill (1).	Torpedoes (4). Seamanship (1).
	3	Skirmish (4). Seamanship (1).	Torpedoes (4). Landing party (1).	Target, great guns (4). Seamanship (1).	Steam tactics (4). Landing party (1).
	4	Steam tactics (4). Seamanship (1).	Target, great guns (4). Battery drill (1).	Torpedoes (4). Seamanship (1).	Skirmish (4). Battery drill (1).
Apr.....	1	Torpedoes (4). Landing party (1).	Skirmish (4). Seamanship (1).	Steam tactics (4). Landing party (1).	Target, great guns (4). Seamanship (1).
	2	Steam tactics (4). Battery drill (1).	Steam tactics (4). Seamanship (1).	Steam tactics (4). Battery drill (1).	Steam tactics (4). Seamanship (1).
	3	Seamanship (4). Seamanship (1).	Seamanship (4). Landing party (1).	Seamanship (4). Seamanship (1).	Seamanship (4). Landing party (1).
	4	Battery drill (4). Battery drill (1).	Seamanship (4). Seamanship (1).	Battery drill (4). Battery drill (1).	Seamanship (4). Seamanship (1).
May.....	1	Seamanship (4). Landing party (1).	Seamanship (4). Seamanship (1).	Seamanship (4). Landing party (1).	Seamanship (4). Seamanship (1).
	2	Deviation compass (4). Seamanship (1).	Deviation compass (4). Seamanship (1).	Deviation compass (4). Seamanship (1).	Deviation compass (4). Seamanship (1).
	3	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	M.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	T.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	W.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	Th.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	F.	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	S.				

ANNUAL EXAMINATION.

June 1
to 10.

June 10
to
Aug. 28

Practice cruise.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month. Cadets of the Engineer Division will take part in drills on board the *Bancroft* when underway, in "Practical electricity," in "General steam tactics," and at "Fire quarters." At other times they will have "Steam drill."

SECOND CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct....	1	Company.	Target, machine guns (4).	Field artillery.	Steam tactics (4).
	2	Field artillery.	Seamanship (1). Steam tactics (4).	Company.	Seamanship (1). Target, machine guns (4).
	3	Target, machine guns (4). Seamanship (1).	Battery drill (1). Company.	Steam tactics (4).	Battery drill (1). Field artillery.
	4	Steam tactics (4).	Field artillery.	Seamanship (1). Target, machine guns (4).	Company.
Nov....	1	Battery drill (1). Battalion infantry.	Battalion infantry.	Battery drill (1). Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec....	1	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	2	Steam.	Sword exercise.	Steam.	Signals (1). Seamanship (2).
	3	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	4	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
Jan....	1	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	2	Steam.	Sword exercise.	Steam.	Signals (1). Seamanship (2).
	3	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	4	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.

SEMI-ANNUAL EXAMINATION

Feb. . .	1	Steam.	Practical ordnance.	Steam.	Sword exercise.
	2	Steam.	Sword exercise.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Sword exercise.	Steam.
	4	Sword exercise.	Steam.	Practical ordnance.	Steam.
Mar.	1	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	2	Target great guns (4). Battery drill (1).	Steam tactics (4). Seamanship (1).	Skirmish (4). Battery drill (1).	Target great guns (4). Seamanship (1).
	3	Skirmish (4). Seamanship (1).	Target, small arms (4). Landing party (1).	Target great guns (4). Seamanship (1).	Steam tactics (4). Landing party (1).
	4	Steam tactics (4). Seamanship (1).	Target, great guns (4). Battery drill (1).	Target, small arms (4). Seamanship (1).	Skirmish (4). Battery drill (1).
Apr	1	Target, small arms (4). Landing party (1).	Skirmish (4). Seamanship (1).	Steam tactics (4). Landing party (1).	Target great guns (4). Seamanship (1).
	2	Seamanship (4). Battery drill (1).	Seamanship.	Seamanship (4). Battery drill (1).	Seamanship.
	3	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).
	4	Battery drill.	Seamanship.	Battery drill.	Seamanship.
May. . .	1	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.
	2	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).
	3	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	M	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	T	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	W	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	Th	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	F	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	Sat				

June 1 to 10

ANNUAL EXAMINATION

Drills will be suspended from December 24 to January 2. There will be five quarters on one Wednesday afternoon in each month.

SECOND CLASS—Continued.

Week.	Day.	Period.	First section.	Second section.	Third section.
First.	Monday ...	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Tuesday...	1	Bench.	Bench.	Machine tools.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Thursday..	1	Bench.	Bench.	Machine tools.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday.....	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Saturday ..	1	Bench.	Bench.	Machine tools.
		2			
		3			
Second.	Monday ...	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Tuesday...	1	Bench.	Bench.	Machine tools.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2	Blacksmith shop.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Thursday..	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2	Target practice.	Pattern and boiler shops.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday ...	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2	Blacksmith shop.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Saturday ..	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2			
		3			
Third.	Monday ...	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Pattern and boiler shops.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Tuesday..	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Pattern and boiler shops.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Thursday..	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday.....	1	Machine tools.	Machine tools.	Blacksmith shop.
		2	Machine tools.	Target practice.	Blacksmith shop.
		3	Target practice.	Target practice.	Target practice.
	Saturday ..	1	Machine tools.	Machine tools.	Blacksmith shop.
		2			
		3			
Fourth.	Monday ...	1	Machine tools.	Machine tools.	Blacksmith shop.
		2	Machine tools.	Target practice.	Blacksmith shop.
		3	Target practice.	Target practice.	Target practice.
	Tuesday...	1	Machine tools.	Machine tools.	Blacksmith shop.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Thursday..	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday.....	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Saturday ..	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2			
		3			

SECOND CLASS—Continued.

Week.	Day.	Period.	Fourth section.	Fifth section.	Sixth section.
First.	Monday ...	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Friday ...	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2	Target practice.	Pattern and boiler shops.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2			
		3			
Second.	Monday ...	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2	Target practice.	Pattern and boiler shops.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2	Machine tools.	Target practice.	Blacksmith shop.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Bench.	Machine tools.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Friday ...	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Bench.	Machine tools.	Machine tools.
		2			
		3			
Third.	Monday ...	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Bench.	Machine tools.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Bench.	Machine tools.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Friday ...	1	Pattern and boiler shops.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Pattern and boiler shops.	Bench.	Bench.
		2			
		3			
Fourth.	Monday ...	1	Pattern and boiler shops.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Pattern and boiler shops.	Bench.	Bench.
		2	Pattern and boiler shops.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Blacksmith shop.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Blacksmith shop.	Bench.	Bench.
		2	Blacksmith shop.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Friday ...	1	Blacksmith shop.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Blacksmith shop.	Bench.	Bench.
		2			
		3			

Note. First period 8 a.m. to 12 m. second period 1 p.m. to 5 p.m. third period 7.30 to 9.30 p.m.

THIRD CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Boats (4). Seamanship (1).	Field artillery.	Boats (4). Seamanship (1).
	2	Field artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	3	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Field artillery.
	4	Boats (4). Battery drill (1).	Field artillery.	Boats (4). Battery drill (1).	Company.
Nov.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Steam.	Seamanship.	Target, small arms (3). Great guns (2). Steam.	Sword exercise.
	2	Target, small arms (3). Great guns (2).	Sword exercise.	Steam.	Seamanship.
	3	Seamanship.	Steam.	Sword exercise.	Target, small arms (3). Great guns (2).
	4	Sword exercise.	Target, small arms (3). Great guns (2).	Seamanship.	Steam.
Jan.....	1	Steam.	Seamanship.	Target, small arms (3). Great guns (2). Steam.	Sword exercise.
	2	Target, small arms (3). Great guns (2).	Sword exercise.	Steam.	Seamanship.
	3	Seamanship.	Steam.	Sword exercise.	Target, small arms (3). Great guns (2).
	4	Sword exercise.	Target, small arms (3). Great guns (2).	Seamanship.	Steam.
SEMI-ANNUAL EXAMINATION.					
Feb.....	1	Steam.	Signals (3). Seamanship (2).	Target, small arms (3). Great guns (2). Steam.	Sword exercise.
	2	Target, small arms (3). Great guns (2).	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	3	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Target, small arms (3). Great guns (2).
	4	Sword exercise.	Target, small arms (3). Great guns (2).	Signals (3). Seamanship (2).	Steam.
Mar.....	1	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	2	Target, small arms (4). Battery drill (1).	Seamanship.	Skirmish (4). Battery drill (1).	Boats (4). Seamanship (1).
	3	Skirmish (4). Seamanship (1).	Boats (4). Landing party (1).	Target, small arms (4). Seamanship (1).	Seamanship (4). Landing party (1).
	4	Seamanship.	Target, small arms (4). Battery drill (1).	Boats (4). Seamanship (4).	Skirmish (4). Battery drill (1).
Apr.....	1	Boats (4). Landing party (1).	Skirmish (4). Seamanship (1).	Seamanship (1). Landing party (1).	Target, small arms (4). Seamanship (1).
	2	Seamanship (4). Battery drill (1).	Seamanship.	Seamanship (4). Battery drill (1).	Seamanship.
	3	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).
	4	Battery drill.	Seamanship.	Battery drill.	Seamanship.
May.....	1	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.
	2	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).
	3	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	M.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	T.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	W.	Boats.	Boats.	Boats.	Boats.
	Th.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	F.	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	S.				
June 1 to 10.	ANNUAL EXAMINATION.				
June 10 to Aug. 28.	Practice cruise.				

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on Wednesday afternoon in each month.

FOURTH CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Boats (4). Seamanship (1).	Field artillery.	Boats (4). Seamanship (1).
	2	Field artillery.	Boats (4). Battery drill (1).	Company	Boats (4). Battery drill (1).
	3	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Field artillery
	4	Boats (4). Battery drill (1).	Field artillery.	Boats (4). Battery drill (1).	Company
Nov.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec....	1	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	2	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	3	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	4	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Jan....	1	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	2	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	3	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	4	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Feb....	1	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	2	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Great guns (2).
	3	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.
	4	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Mar....	1	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	2	Gymnastics (4). Battery drill (1).	Seamanship.	Skirmish (4). Battery drill (1).	Boats (4). Seamanship (1).
	3	Skirmish (4). Seamanship (1).	Boats (4). Landing party (1).	Gymnastics (4). Seamanship (1).	Seamanship (4). Landing party (1).
	4	Seamanship.	Gymnastics (4). Battery drill (1).	Boats (4). Seamanship (1).	Skirmish (4). Battery drill (1).
Apr....	1	Boats (4). Landing party (1).	Skirmish (4). Seamanship (1).	Seamanship (4). Landing party (1).	Gymnastics (4). Seamanship (1).
	2	Seamanship (4). Battery drill (1).	Seamanship.	Seamanship (4). Battery drill (1).	Seamanship (4). Battery drill (1).
	3	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).
	4	Battery drill.	Seamanship.	Battery drill.	Seamanship.
May...	1	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.
	2	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).
	3	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	5	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	6	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	7	Boats.	Boats.	Boats.	Boats.
	8	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
Sept...	1	Boats drill.	Battle drill.	Battle drill.	Battle drill.
	2	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	3	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	4	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	5	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	6	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	7	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	8	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	9	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	10	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	11	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	12	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	13	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	14	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	15	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	16	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	17	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	18	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	19	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	20	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	21	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	22	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	23	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	24	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	25	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	26	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	27	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	28	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	29	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	30	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	31	School of soldier.	School of soldier.	School of soldier.	School of soldier.

There will be five quarters on the Western side of the river in each month.

SUMMARY OF PRACTICAL INSTRUCTION.

KIND OF INSTRUCTION.	DURING THE ACADEMIC YEAR.				Total num-ber of in-structions during academic year.	DURING SUMMER MONTHS.			During month of September, fourth class.	Total num-ber of in-structions, exclusive of practice of practice of cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
Seamanship, including stripping and rigging ship	33	30	37	35	135	(*)		(*)	(*)	135
Rigging loft			15	15	30					30
Boats under oars, or sail			15	15	30	(*)	15	(*)	(*)	45
Naval tactics with steam launches	12	4			16		5			21
Navy signals, day		5			5	(*)	3			8
Navy signals, night						(*)	3			3
Army signals, day		5	5		10		2			12
Army signals, night							2			2
Monitor, with great gun practice	4				4					4
General quarters	7	7	7	7	28	(*)		(*)	(*)	28
General quarters, with target practice	4	4	4	4	16	(*)		(*)	(*)	16
Target practice, great guns	8	4			12		5			17
Pivot guns			5	5	10					10
Broadside guns			5	5	10	(*)		(*)	(*)	10
Torpedoes	4				4					4
Practical ordnance	6	5			10					10
Howitzers afloat							5			5
Target practice, howitzers							5			5
School of section									10	10
School of battery	4	5	5	5	19					19
School of battalion artillery	9	9	9	9	36					36
Target practice, machine guns		5			5		5			10
Target practice, small arms			9		9		5			14
Target practice, pistols			5		5					5
School of the soldier									24	24
School of the company	4	5	9	9	27					27

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	DURING THE ACADEMIC YEAR.				Total num-ber of in-structions during academic year.	DURING SUMMER MONTHS.			During month of September, fourth class.	Total num-ber of in-structions, exclusive of practice cruise.	
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.			Fourth class.
Rehearsal of the battalion, infantry	11	11	11	11	44	..	..	..	..	44
Skirmish drill	4	4	4	4	16	..	..	..	..	16
Band drill	15	9	..	..	24	..	..	..	..	24
Small arms	5	15	16	..	36	..	..	..	..	36
Practical instruction in deviation of compass	4	..	..	..	4	( )	..	..	..	4
Practical instruction, navigation	14	..	..	..	..	( )	..	..	..	14
Practical instruction surveying	10	..	..	..	..	..	..	..	..	10
Machine shop and running shop engines	30 and 113	30	..	..	60	..	54	..	..	114 and 113
Running steam launch bores . . . . .	..	5	..	..	5	..	6	..	..	11
Practical instruction in chemistry . . . . .	..	..	13	..	..	..	..	..	..	13
Gymnastics and boxing . . . . .	..	..	..	19	19	..	..	..	..	19
Swimming . . . . .	..	..	..	..	..	..	..	..	24	24
Dancing . . . . .	..	..	..	20	20	..	..	..	..	20
Study periods.											
Practice cruise.											

The instructions in seamanship and gunnery on board of the Practice Steamers are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FIFTY-FIRST ACADEMIC YEAR.

1895-'96.

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1896.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the Administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, United States Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress approved March 2, 1889, provides that "the academic board of the Naval Academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities for training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was removed back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1870, the official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1889.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanical chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two other engineers who had entered the Academy in 1867. After an interval of four years in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first which left the Academy in 1874 and the second in 1875. By an act of Congress approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen; and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and engineer corps of the navy and of the marine corps: *And provided further*, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which have occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall restrict the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do not receive such appointment shall be given a certificate of

graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress approved March 2, 1889, provides that "the academic board of the Naval Academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

	Assumed command.
Commander Franklin Buchanan	Sept. 3, 1845
Commander George P. Upshur.....	Mar. 15, 1847
Commander Cornelius K. Stribling	July 1, 1850
Commander Louis M. Goldsborough.....	Nov. 1, 1853
Captain George S. Blake.....	Sept. 15, 1857
Rear-Admiral David D. Porter.....	Sept. 9, 1865
Commodore John L. Worden	Dec. 1, 1869
Rear-Admiral C. R. P. Rodgers	Sept. 22, 1874
Commodore Foxhall A. Parker.....	July 1, 1878
Rear-Admiral George B. Balch	Aug. 2, 1879
Rear-Admiral C. R. P. Rodgers	June 13, 1881
Captain F. M. Ramsay	Nov. 14, 1881
Commander W. T. Sampson.....	Sept. 9, 1886
Captain R. L. Phythian	June 30, 1890
Captain P. H. Cooper	Nov. 15, 1894

BOARD OF VISITORS, JUNE, 1895.

Honorable CHARLES J. FAULKNER, U. S. Senate, W. Va., *President*.
Honorable J. A. T. HULL, House of Representatives, Iowa, *Vice-President*.
Honorable F. T. DUBOIS, U. S. Senate, Idaho.
Honorable J. D. SAYERS, House of Representatives, Texas.
Honorable F. C. TATE, House of Representatives, Georgia.
Honorable J. B. HENDERSON, St. Louis, Missouri.
Reverend M. M. BENTON, Louisville, Kentucky.
Mr. ROBERT M. THOMPSON, New York City, N. Y.
Colonel A. F. FLEET, Mexico, Missouri.
Mr. E. P. MORRISSETT, Montgomery, Alabama.
Professor THOMAS R. LOUNSBURY, New Haven, Connecticut.
Professor W. M. THORNTON, Charlottesville, Virginia.

ACADEMIC CALENDAR.

1895-1896.

1895.

October 1.—Beginning of first term Tuesday.

1896.

January 27-February 1.—Semi-annual examination . . . Monday-Saturday.

February 1.—End of first term Saturday.

May 15.—Examination of candidates for admission as naval cadets Friday.

May 30.—End of academic year, 1895-'96 Saturday.

June 1-6.—Annual examination Monday-Saturday.

September 1.—Examination of candidates for admission as naval cadets Tuesday.

October 1.—Beginning of first term, 1896-'97 Thursday.

The academic months end on the following days:

1895-1896.

October	November 2	February	February 2.
November	November 30	March	March 2.
December	December 28	April	April 2.
January	January 25	May	May 2.

1896-1897.

October	October 31	December	December 2.
November	November 28	January	January 2.

CALENDAR FOR 1895-96.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
1	2	3	4	5	6	7	-----	-----	-----	1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	-----
29	30	-----	-----	-----	-----	-----	26	27	28	29	30	-----	-----
OCTOBER.							MAY.						
-----	-----	1	2	3	4	5	-----	-----	-----	-----	-----	1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31	-----	-----	24	25	26	27	28	29	30
-----	-----	-----	-----	-----	-----	-----	31	-----	-----	-----	-----	-----	-----
NOVEMBER.							JUNE.						
-----	-----	-----	-----	-----	1	2	-----	1	2	3	4	5	6
3	4	5	6	7	8	9	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30	-----	-----	-----	-----
DECEMBER.							JULY.						
1	2	3	4	5	6	7	-----	-----	-----	1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	31	-----	-----	-----	-----	26	27	28	29	30	31	-----
JANUARY.							AUGUST.						
-----	-----	-----	1	2	3	4	-----	-----	-----	-----	-----	-----	1
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31	-----	23	24	25	26	27	28	29
-----	-----	-----	-----	-----	-----	-----	30	31	-----	-----	-----	-----	-----
FEBRUARY.							SEPTEMBER.						
-----	-----	-----	-----	-----	-----	1	-----	-----	1	2	3	4	5
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30	-----	-----	-----
MARCH.							OCTOBER.						
1	2	3	4	5	6	7	-----	-----	-----	-----	1	2	3
8	9	10	11	12	13	14	4	5	6	7	8	9	10
15	16	17	18	19	20	21	11	12	13	14	15	16	17
22	23	24	25	26	27	28	18	19	20	21	22	23	24
29	30	31	-----	-----	-----	-----	25	26	27	28	29	30	31

OFFICERS

ATTACHED TO THE

UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,

CAPTAIN P. H. COOPER.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT-COMMANDER A. ROSS.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT W. P. POTTER.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER W. H. BROWNSON.

LIEUTENANT C. E. COLAHAN, *Assistant.*

LIEUTENANT T. PORTER, *Assistant and Drill Officer.*

LIEUTENANT D. DANIELS, *Assistant and Drill Officer.*

LIEUTENANT P. W. HOUBIGAN, *Assistant and Drill Officer.*

SEAMANSHIP.

Head of Department,

LIEUTENANT-COMMANDER W. T. SWINBURNE.

Assistants,

LIEUTENANT F. E. BEATTY,

LIEUTENANT R. M. DOYLE,

LIEUTENANT DEWITT COFFMAN.

ORDNANCE.

Head of Department,

LIEUTENANT ALEXANDER MCCRACKIN.

Assistants,

LIEUTENANT J. H. GLENNON,

LIEUTENANT J. M. ELLICOTT,

ENSIGN E. MOALE, JR.

16 OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

Sword Master,

A. J. CORBESIER.

Assistant Sword Masters,

J. B. RETZ,

G. HEINTZ.

NAVIGATION.

Head of Department.

LIEUTENANT-COMMANDER B. F. TILLEY.

Assistants,

LIEUTENANT J. A. NORRIS,

LIEUTENANT C. J. ROUSH,

LIEUTENANT JOHN GIBSON

STEAM ENGINEERING.

Head of Department,

CHIEF ENGINEER C. W. RAE

Assistants,

PASSED ASSISTANT ENGINEER F. H. ELDREDGE,

PASSED ASSISTANT ENGINEER F. W. BARTLETT,

PASSED ASSISTANT ENGINEER L. D. MINER,

ASSISTANT ENGINEER H. W. JONES,

ASSISTANT ENGINEER H. O. STICKNEY.

MECHANICS

Head of Department,

LIEUTENANT-COMMANDER CHARLES BELKNAP.

Assistants,

LIEUTENANT M. L. WOOD,

LIEUTENANT W. H. ALLEN,

LIEUTENANT J. M. ORCHARD,

LIEUTENANT HARRY PHELPS,

PROFESSOR W. W. JOHNSON, A. M.

PHYSICS

Head of Department,

PROFESSOR N. M. TERRY, A. M., PH. D.

Assistants,

LIEUTENANT T. B. HOWARD,

LIEUTENANT J. E. CHAVEZ,

LIEUTENANT J. A. HOOKERWERTH,

ENGIN J. W. OMAN,

PROFESSOR PAUL J. DASHNELL, PH. D.

MATHEMATICS.

Head of Department,

COMMANDER ASA WALKER.

Assistants,

LIEUTENANT A. W. GRANT,
LIEUTENANT H. G. DRESSEL,
ENSIGN A. H. ROBERTSON,
ENSIGN L. H. CHANDLER,
ENSIGN W. V. PRATT,
ENSIGN G. R. MARVELL.

ENGLISH.

Head of Department,

LIEUTENANT-COMMANDER PERRY GARST.

Assistants,

LIEUTENANT E. B. UNDERWOOD,
LIEUTENANT J. P. PARKER,
LIEUTENANT G. R. CLARK,
ENSIGN E. W. EBERLE,
ENSIGN E. H. DURELL,
ENSIGN F. B. BASSETT,
PROFESSOR W. W. FAY, A. M.,
PROFESSOR A. N. BROWN.

LANGUAGES.

Head of Department,

LIEUTENANT G. L. DYER.

Assistants,

LIEUTENANT T. SNOWDEN,
ENSIGN B. F. HUTCHISON,
PROFESSOR JULES LEROUX,
PROFESSOR HENRI MARION,
PROFESSOR SAMUEL GARNER, PH. D.,
ASSISTANT PROFESSOR P. J. DES GARENNES, A. M.

DRAWING.

Head of Department,

LIEUTENANT G. P. COLVOCORESSES.

Assistants,

ENSIGN A. B. HOFF,
PROFESSOR C. F. BLAUVELT.

BRANCH OF PHYSICAL TRAINING.

In Charge,

SURGEON HENRY G. BEYER, M. D., PH. D.

Instructor,

MATTHEW STROHM.

OFFICERS NOT ATTACHED TO ACADEMIC STAFF.

LIEUTENANT-COMMANDER U. SEBREE, *in Charge of Ships.*
 MEDICAL DIRECTOR T. C. WALTON, M. D.
 SURGEON W. R. DU BOIS, M. D.
 PASSED ASSISTANT SURGEON S. S. WHITE, M. D.
 PASSED ASSISTANT SURGEON A. M. D. McCORMICK, M. D.
 PAY DIRECTOR T. T. CANWELL, *Pay Officer.*
 PAY INSPECTOR W. GOLDSBOROUGH *Commissary and General Storekeeper.*
 CHAPLAIN A. L. ROYCE.
 PROFESSOR M. OLIVER, U. S. N. *Librarian.*
 J. M. SPENCER, *Assistant Librarian.*
 R. M. CHASE *Secretary.*
 GUNNER A. A. PHELPS.

Stores and Ships.

BOATSWAIN J. S. SINCLAIR,

Mates.

C. J. MURPHY,
 W. G. SMITH.

 MARINE OFFICERS.

LIEUTENANT-COLONEL McLANE TILTON, *Commanding Marines,*
 CAPTAIN J. M. T. YOUNG.
 FIRST LIEUTENANT C. A. DOYEN.
 SECOND LIEUTENANT C. F. MACKLIN.

ACADEMIC BOARD.

THE SUPERINTENDENT
 THE COMMANDANT OF CADETS
 THE HEAD OF THE DEPARTMENT OF SEAMANSHIP.
 THE HEAD OF THE DEPARTMENT OF ORDNANCE.
 THE HEAD OF THE DEPARTMENT OF NAVIGATION
 THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.
 THE HEAD OF THE DEPARTMENT OF MECHANICS
 THE HEAD OF THE DEPARTMENT OF PHYSICS
 THE HEAD OF THE DEPARTMENT OF MATHEMATICS.
 THE HEAD OF THE DEPARTMENT OF ENGLISH.
 THE HEAD OF THE DEPARTMENT OF LANGUAGE.
 THE HEAD OF THE DEPARTMENT OF DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

CADET LIEUTENANT-COMMANDER,

R. H. ROBINSON.

CADET LIEUTENANTS,

T. T. CRAVEN,

C. L. POOR,

J. H. HOLDEN,

E. McCAULEY, JR.

CADET LIEUTENANT AND ADJUTANT,

L. C. PALMER.

CADET PASSED ASSISTANT ENGINEER,

C. L. LEIPER.

CADET ASSISTANT ENGINEER,

E. T. FITZGERALD.

CADET JUNIOR LIEUTENANTS,

H. S. KIMBALL,

T. A. KEARNEY,

F. E. RIDGELEY,

D. W. WURTSBAUGH.

CADET ENSIGNS,

A. E. KALBACH,

H. C. MUSTIN,

R. EARLE,

C. E. GILPIN.

CADET CHIEF PETTY OFFICER,

D. W. KNOX.

CADET PETTY OFFICERS OF THE FIRST CLASS.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
M. ST. C. ELLIS,	J. H. ROYS,	E. P. JESSOP,	W. T. CLUVERIUS, JR.,
A. MACARTHUR, JR. JR.,	R. I. CURTIN,	D. M. WOOD,	R. E. WALKER,
A. BRONSON, JR.,	C. M. TOZER,	I. C. WETTENGEL,	W. G. DUBOSE,
F. L. SHEFFIELD.	E. F. EGGERT.	J. W. POWELL.	H. E. YARNELL.

CADET PETTY OFFICERS OF THE SECOND CLASS.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
A. H. MCCARTHY,	W. H. REYNOLDS,	G. CHASE,	A. J. HERBURN,
N. L. JONES,	H. P. PERRILL,	D. E. THELEEN,	W. P. GILES,
A. KAUTZ,	F. R. HOLMAN,	J. W. MORSE,	H. N. JENSEN,
O. G. MURFIN.	A. T. GRAHAM.	H. WILLIAMS.	L. M. OVERSTREET.

SUMMER CRUISE, 1895.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP MONONGAHELA.

June 9 to August 30.

COMMANDER W. H. BROWSON, <i>Commanding.</i>	ENSIGN L. H. CHANDLER, <i>Watch Officer.</i>
LIEUTENANT C. E. COLAHAN, <i>Executive Officer.</i>	ENSIGN A. B. HOFF, <i>Watch Officer.</i>
LIEUTENANT T. B. HOWARD, <i>Navigator.</i>	SURGEON H. G. BEYER.
LIEUTENANT W. H. ALLEN, <i>Watch Officer.</i>	ASSISTANT SURGEON H. D. WILSON.
LIEUTENANT J. P. PARKER, <i>Watch Officer.</i>	PAYMASTER M. C. McDONALD.
LIEUTENANT J. GIBSON, <i>Watch Officer.</i>	CHAPLAIN A. L. ROYCE.
ENSIGN J. W. OMAN, <i>Instructor in Navigation.</i>	

First Class—Line Division.

Blaset, H. O.,
Cluverius, W. T., jr.,
Craven, T. T.,
Curtin, R. I.,
Earle, R.,
Ellis, M. St. C.,
Gilpin, C. E.,

Holden, J. H.,
Jessop, E. P.,
Kalbach, A. E.,
Kearney, T. A.,
Kimball, H. S.,
Knox, D. W.,
MacArthur, A., jr., jr.,

McCanley, E., jr.,
Mustin, H. C.,
Palmer, L. C.,
Poor, C. L.,
Ridgely, F. E.,
Robinson, R. H.,
Roya, J. H.,

Tear, C. M.,
Walker, R. E.,
Wettengel, I. C.,
Wood, D. M.,
Wurtsbaugh, D. W.

Third Class.

Abele, C. A.,
Applewhite, S. C.,
Arnold, W. W.,
Babcock, J. F.,
Boone, C.,
Briggs, W. G.,
Briggs, Z. E.,
Brockway, B. L.,
Brown, G., jr.,
Brown, J. J.,
Brown, M. H.,
Constien, E. T.,
Cotton, L. A.,
Croan, W. P.,
Diager, H. C.,

Elson, H. J.,
England, W. H.,
Evans, F. T.,
Fallar, G. W.,
Farrin, T. B.,
Gilmer, J. B.,
Graham, J. S.,
Halligan, J., jr.,
Hand, J. A., jr.,
Haurahan, D. C.,
Hord, O. S.,
Hunter, C. M.,
Huntington, A. F.,
Johnson, T. L.,
Kress, J. C.,

Lehfeldt, H. A.,
Love, J. M., jr.,
Moistyre, E. W.,
Macy, U. S.,
Madison, Z. H., jr.,
Mannix, D. P.,
Marble, R. N., jr.,
Mitchell, A. N.,
Nelson, C. P.,
Peterson, R. L.,
Pettingill, G. T.,
Pinney, F. L.,
Purse, H. A.,
Roper, W. G.,
Rutledge, C. C.,

Schofield, J. A.,
Shane, L.,
Smith, G. L.,
Sweet, G. C.,
Tardy, W. B.,
Tarrant, W. T.,
Taylor, H. K.,
Thorpe, G. C.,
Watts, W. C.,
Wells, W. B.,
Williams, Henry,
Williams, Y. S.,
Woods, E.,
Wright, H. T.

Fourth Class.

Bailey, J. E.,
Beckner, J. T.,
Bird, O. S.,
Bissell, H. H.,
Cocke, H. C.,
Conger, W. H.,
Courtney, C. E.,
Crease, E. O.,
Cull, J. E.,
Fenner, E. B.,

Ferguson, G. S.,
Frawley, W. J.,
Glendon, H. M.,
Gronslade, J. W.,
Helm, F. P.,
Horne, F. J.,
Johnson, A. W.,
Kalbfus, E. C.,
Lackey, H. E.,
Maguire, C. L.,

Mathews, J. E.,
Morris, T. J.,
Pope, R. E.,
Royall, H. H.,
Savidge, A. C.,
Sayles, W. R.,
Schmidt, O.,
Shapley, L. S.,
Tausig, J. K.,
Thomas, S. B.,

Vernon, W. M.,
Watson, A. E.,
West, A. S.,
White, R. D.,
Wood, R. T.,
Wright, L. E.,
Yates, F. H.

UNITED STATES PRACTICE SHIP BANCROFT.

June 8 to August 30.

LIEUTENANT-COMMANDER W. T. SWINBURNE, *Commanding*.LIEUTENANT J. A. NORRIS, *Executive Officer*.LIEUTENANT DE W. COFFMAN, *Navigator*.ENSIGN E. H. DURELL, *Instructor*.

PASSED ASSISTANT SURGEON S. S. WHITE.

PASSED ASSISTANT ENGINEER F. W. BARTLETT.

ASSISTANT ENGINEER H. O. STICKNEY.

NAVAL CADETS.

*First Class—Engineer Division.*Henry, J. B., jr.,
Rice, G. B.,
Burt, C. P.,Lincoln, G. S.,
Leiper, C. L.,
Castleman, K. G.,Littlefield, W. L.,
Fitzgerald, E. T.,
Crenshaw, A.Marshall, A. W.,
Washington, P.*Second Class.*First detail,
June 17 to June 29.Bryant, S. W.,
DuBose, W. G.,
Duncan, O. D.,
Eggert, E. F.,
Graham, A. T.,
Hilleary, J. F.,
Houston, V. S.,
Jones, N. L.,
Kautz, A.,
Leahy, W. D.,
Miller, C. R.,
Overstreet, L. M.,
Pressey, A. W.,
Sargent, L. R.,
White, W. R.Second detail,
July 6 to July 20.Asserson, W. C.,
Bagby, R. C.,
Collins, H. L.,
Giles, W. P.,
Hart, T. C.,
Henderson, R. W.,
Hepburn, A. J.,
Holman, F. R.,
Hoopes, E. T.,
Keenan, E. C.,
Kempff, C. S.,
McCarthy, A. H.,
Mahony, D. S.,
Morse, J. W.,
Perrill, H. P.,
Reynolds, W. H.,
Sexton, W. R.,
Sheffield, F. L.,
Van Orden, G.,
Williams, H.,
Yarnell, H. E.Third detail,
July 27 to August 9.Boyd, D. F., jr.,
Chase, G.,
Day, J. A.,
Graeme, J. W.,
Herndon, H. R.,
Jenson, H. N.,
Landis, I. F.,
McDowell, W.,
Magill, S. G., jr.,
Murfin, O. G.,
Naylor, C. J.,
Owen, A. C.,
Owens, C. T.,
Powell, J. W.,
Pratt, P. L.,
Richardson, L. C.,
Roehle, C. C.,
Smith, A. St. C., jr.,
Terry, J. D.,
Theleen, D. E.,
Webber, G.,
Weasels, A. L.

SYNOPSIS OF THE CRUISE, 1895.

MONONGAHELA.

Cadets, first class, line division, and the third and fourth classes embarked June 8.

Sailed from Annapolis June 10.

Sailed from Lynnhaven Bay for Funchal, Madeira, June 13.

Arrived at Funchal, Madeira, July 13.

Sailed from Funchal July 18.

Arrived at Hampton Roads August 20.

Sailed from Hampton Roads August 22.

Arrived at Annapolis August 28.

BANCROFT.

Cadets, first class, engineer division, and the first detail of second class embarked June 17
Sailed from Annapolis June 18.
Arrived at Port Jefferson, L. I., June 21. Sailed June 26.
Arrived at Newport News, Va., June 28. Sailed June 29.
Arrived at Annapolis June 29. Sailed July 8
Arrived at Gardiners Bay, L. I., July 10. Sailed July 16.
Arrived at Newport News, Va., July 18. Sailed July 18
Arrived at Annapolis July 20. Sailed July 29.
Arrived at Gardiners Bay, L. I., July 31. Sailed August 5.
Arrived at Newport News, Va., August 7. Sailed August 8.
Arrived at Annapolis August 9.

PRACTICAL INSTRUCTION AT NAVAL ACADEMY.

WORK IN MACHINE SHOP FROM JUNE 10 TO AUGUST 14.

Naval cadets of first class, engineer division	1
Naval cadets of second class	2
On board practice ships <i>Monongahela</i> and <i>Bancroft</i>	19
Absent on sick leave	4

CLASSES OF THE NAVAL CADETS

AT THE BEGINNING OF THE ACADEMIC YEAR, 1895-'96.

[Corrected to October 4, 1895.]

Naval Cadets of the class appointed in 1890, performing required service afloat—Line Division—33 members.

Order of general merit.	Name.	State from which appointed.	Date of admission.
* 1	Robert, William Pierre.....	Mississippi.....	May 20, 1890
* 2	Cox, Daniel Hargate.....	New York.....	Sept. 9, 1890
* 3	Gillis, Irvin Van Gorder.....	New York.....	Sept. 6, 1890
* 4	Roberts, Thomas Gaines.....	Alabama.....	May 27, 1890
* 5	Sellers, David Foote.....	New Mexico.....	May 21, 1890
* 6	Adams, Lawrence Stowell.....	Pennsylvania.....	Sept. 26, 1890
7	Stone, Raymond.....	Alabama.....	Sept. 5, 1890
8	Tompkins, John Thomas.....	Louisiana.....	Sept. 6, 1890
9	McLean, Ridley.....	Tennessee.....	May 20, 1890
10	Webster, Charles.....	Massachusetts.....	Sept. 6, 1890
11	Babin, Provost.....	New York.....	Sept. 6, 1890
12	Jones, Lewis Burton.....	New York.....	May 21, 1890
13	Fullinwider, Simon Peter.....	Missouri.....	May 21, 1890
14	Graham, Stephen Victor.....	Michigan.....	May 19, 1890
15	Bennett, Ernest Linwood.....	Massachusetts.....	Sept. 24, 1890
16	Luby, John McClane.....	Texas.....	Sept. 8, 1890
17	Sandoz, Fritz Louis.....	Louisiana.....	May 19, 1890
18	Galbraith, Gilbert Smith.....	Pennsylvania.....	Sept. 8, 1890
19	Shaw, Melville Jones.....	Minnesota.....	Sept. 6, 1890
20	Kavanagh, Arthur Glynn.....	Nebraska.....	May 20, 1890
21	Bookwalter, Charles Sumner.....	Illinois.....	Sept. 8, 1890
22	Scott, William Pitt.....	Pennsylvania.....	May 20, 1890
23	Snow, Carlton Farwell.....	Maine.....	May 10, 1890
24	Osborn, Robert Hatfield.....	New York.....	May 23, 1890
25	Spear, Roscoe.....	Pennsylvania.....	May 21, 1890
26	Manion, Walter James.....	Louisiana.....	Sept. 6, 1890
27	McNeely, Robert Whitehead.....	North Carolina.....	Sept. 8, 1890
28	Turpin, Walter Stevens.....	Maryland.....	May 22, 1890
29	Bulmer, Roscoe Carlyle.....	Nevada.....	Sept. 26, 1890
30	Whitted, William Scott.....	North Carolina.....	May 20, 1890
31	Stone, George Loring Porter.....	Georgia.....	Sept. 26, 1890
32	Gelm, George Earl.....	New York.....	May 22, 1890
33	England, Clarence.....	Arkansas.....	Sept. 5, 1890

Engineer Division—13 members.

1	Hudgins, John Milton.....	Virginia.....	Sept. 8, 1890
2	McMorris, Boling Kavanagh.....	Alabama.....	Sept. 15, 1890
3	Hinds, Alfred Walton.....	Alabama.....	Sept. 6, 1890
4	Moody, Roscoe Charles.....	Maine.....	Sept. 8, 1890
5	Cooper, Ignatius Taylor.....	Delaware.....	May 20, 1890
6	Baker, Henry Thomas.....	Ohio.....	Oct. 7, 1890
7	Chappell, Ralph Hubert.....	Michigan.....	May 22, 1890
8	James, Leland Frierson.....	South Carolina.....	Sept. 9, 1890
9	Lyon, Frank.....	Kentucky.....	May 20, 1890
10	Reeves, Joseph Mason.....	Illinois.....	Sept. 8, 1890
11	Cone, Hutch Ingham.....	Florida.....	Sept. 5, 1890
12	Winship, Emory.....	Georgia.....	June 3, 1890
13	De Lany, Edwin Hayden.....	Tennessee.....	May 21, 1890

Naval Cadets of the class appointed in 1891, performing required service afloat—1st Division—27 members.

Order of general merit.	Name.	State from which appointed.	Date of admission.
1	Smith, Stuart Farrar	Pennsylvania.....	Sept. 4 '90
2	Greesbeck, William Gerard.....	Ohio.....	Sept. 4 '90
3	Brumby, Frank Hardeman.....	Georgia.....	Sept. 6 '90
4	Baldwin, Frank Pardee.....	New Jersey.....	Sept. 6 '90
5	Davidson, William Christopher	South Dakota.....	Sept. 20 '90
6	Laning, Harris	Illinois	May 19 '90
7	Bannon, Philip Michael.....	Maryland.....	May 19 '90
8	Chester, Arthur Tremaine.....	At large	May 19 '90
9	Monaghan, John Robert.....	Washington	Sept. 7 '90
10	Butler, Henry Varnum, jr.....	New York.....	Sept. 8 '90
11	Walker, James Erling.....	North Carolina	Sept. 7 '90
12	Cushman, William Reynolds.....	New York	Sept. 8 '90
13	Todd, David Wooster.....	California.....	Sept. 8 '90
14	Raby, James Joseph.....	Michigan	Sept. 9 '90
15	Standley, William Harry	California.....	Sept. 7 '90
16	Gherardi, Walter Rockwell	At large	Sept. 4 '90
17	Klemann, John Valentine	New York.....	Sept. 10 '90
18	Bennett, Kenneth Marratt.....	New Jersey.....	Sept. 8 '90
19	McCormack, Michael James.....	Michigan	Sept. 8 '90
20	Bagley, Worth.....	North Carolina	Sept. 7 '90
21	Wadhams, Albion James.....	New York	Sept. 4 '90
22	Barnes, Cassius Bartlett.....	Oklahoma.....	Sept. 7 '90
23	Watson, Edward Howe.....	Kentucky	Sept. 7 '90
24	Breckinridge, Joseph Cabell... ..	Kentucky	Sept. 8 '90
25	Knepper, Orlo Smith.....	Pennsylvania.....	Sept. 4 '90
26	Hall, Newt Hamill.....	Texas	Sept. 7 '90
27	Johnston, Rufus Zenas, jr.....	North Carolina	Sept. 10 '90

Engineer Division—12 members.

1	Dirk, Thomas Merritt.....	South Carolina.....	Sept. 8 '90
2	Mallory, Charles King.....	Tennessee	Sept. 25 '90
3	Mansfield, Newton.....	Ohio.....	Sept. 7 '90
4	Garrison Daniel Merabon.....	New Jersey.....	June 1 '90
5	Karna, Franklin D	Ohio.....	Sept. 20 '90
6	Morton, James Prorator	Missouri.....	Sept. 8 '90
7	Freeman, Frederick Newton.....	Indiana.....	Sept. 9 '90
8	Walker, Charles Henry	Massachusetts.....	Sept. 2 '90
9	Marshall, John Francis, jr.....	Texas	Sept. 6 '90
10	Merritt, Darwin Robert	Iowa	Sept. 20 '90
11	Dunn, Edward Howard	Connecticut	Sept. 1 '90
12	Eckhardt, Ernest Frederick.	Wisconsin	Sept. 1 '90

Naval Cadets of the First Class—Line Division—26 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Bronson, Amen, jr.....	Nebraska.....	Sept. 30, 1892	4	22
Cluverius, Wat Tyler, jr.....	Louisiana.....	May 20, 1892	10	7
Craven, Thomas Tingey.....	New Hampshire.....	Sept. 19, 1892	7	15
Curtin, Roland Irvin.....	Pennsylvania.....	Sept. 6, 1892	7	15
Earle, Ralph.....	Massachusetts.....	Sept. 6, 1892	7	15
Ellis, Mark Saint Clair.....	Arkansas.....	July 1, 1892	8	19
Gilpin, Charles Edward.....	Michigan.....	Sept. 6, 1892	7	15
Holden, Jonas Hannibal.....	Vermont.....	May 20, 1892	10	7
Jessop, Earl Percy.....	West Virginia.....	Sept. 6, 1892	7	15
Kalbach, Andrew Edwin.....	Pennsylvania.....	July 1, 1892	8	17
Kearney, Thomas Albert.....	Missouri.....	Sept. 6, 1892	7	15
Kimball, Henry Swift.....	Massachusetts.....	Sept. 6, 1892	7	15
Knox, Dudley Wright.....	Tennessee.....	Sept. 6, 1892	7	7
MacArthur, Arthur, jr., jr.....	Wisconsin.....	Sept. 6, 1892	7	15
McCauley, Edward, jr.....	New York.....	Oct. 10, 1892	7	15
Mustin, Henry Creskey.....	Tennessee.....	Sept. 6, 1892	7	15
Palmer, Leigh Carlyle.....	Missouri.....	Sept. 6, 1892	7	15
Poor, Charles Longstreet.....	New York.....	Sept. 6, 1892	7	15
Ridgely, Frank Eugene.....	At large.....	Sept. 6, 1892	7	15
Robinson, Richard Hallett.....	Ohio.....	Sept. 6, 1892	7	15
Roya, John Holley.....	New York.....	Sept. 6, 1892	7	15
Tozer, Charles Maxson.....	New York.....	Sept. 19, 1892	7	15
Walker, Ralph Eric.....	Indiana.....	May 20, 1892	10	7
Wettengel, Ivan Cyrus.....	Colorado.....	Sept. 6, 1892	7	15
Wood, Duncan Mahon.....	Alabama.....	Sept. 30, 1892	7	15
Wurtsbaugh, Daniel Wilbert.....	Texas.....	May 20, 1892	10	7

Engineer Division—12 members.

Bisset, Henry Overstreet.....	Maryland.....	Sept. 6, 1892	7	15
Burt, Charles Perry.....	Georgia.....	Sept. 6, 1892	6	4
Castleman, Kenneth Galleher.....	Kentucky.....	Sept. 6, 1892	4	26
Crenshaw, Arthur.....	Alabama.....	Sept. 6, 1892	6	4
Fitzgerald, Edward Thomas.....	Texas.....	Sept. 13, 1892	6	4
Henry, James Buchanan, jr.....	New York.....	Sept. 6, 1892	6	4
Leiper, Charles Lewis.....	Pennsylvania.....	Sept. 6, 1892	6	4
Lincoln, Gatewood Sanders.....	Missouri.....	May 20, 1892	8	26
Littlefield, William Lord.....	Massachusetts.....	Sept. 30, 1892	5	26
Marshall, Albert Ware.....	Texas.....	Sept. 6, 1892	6	4
Rice, George Benjamin.....	Kentucky.....	Sept. 6, 1892	6	4
Washington, Pope.....	North Carolina.....	Sept. 7, 1892	6	4

Naval Cadets of the Second Class—59 members.

Name.	State from which appointed.	Date of admission.	Sea service in previous ships	
			Months.	Days.
Anding, Sheldon Webb.....	Mississippi.....	May 19, 1893	3	7
Asserson, William Christian.....	New York.....	Sept. 25, 1893	2	0
Bagby, Robert Coleman.....	Missouri.....	Sept. 22, 1893	2	0
Boyd, David French, Jr.....	Alabama.....	May 19, 1893	6	4
Bryant, Samuel Woods.....	Pennsylvania.....	May 19, 1893	6	0
Chase, Gilbert.....	Virginia.....	Sept. 6, 1893	2	0
Collins, Henry Lafayette.....	Pennsylvania.....	Sept. 6, 1893	2	0
Day, John Arthur.....	New York.....	May 19, 1893	6	4
DuBose, William Gunnell.....	Georgia.....	Sept. 6, 1893	2	0
Duncan, Oscar Dibble.....	Alabama.....	Sept. 6, 1893	2	4
Eggert, Ernest Frederick.....	Michigan.....	Sept. 6, 1893		6
Falconer, Walter Maxwell.....	Ohio.....	Sept. 6, 1893	2	0
Giles, William Pinkney.....	Texas.....	May 30, 1893	6	0
Graeme, Joseph Wright.....	Pennsylvania.....	Sept. 6, 1893	2	0
Graham, Andrew Thomas.....	Illinois.....	Sept. 6, 1893	2	6
Hart, Thomas Charles.....	Michigan.....	May 19, 1893	6	0
Henderson, Robert William.....	Ohio.....	Sept. 22, 1893	2	0
Hepburn, Arthur Japy.....	Pennsylvania.....	Sept. 22, 1893	2	0
Hilleary, John Francis.....	Maryland.....	Sept. 6, 1893	2	6
Holman, Frederic Ralph.....	Iowa.....	May 19, 1893	6	0
Hoopes, Edward Trimble.....	Pennsylvania.....	Sept. 6, 1893	2	0
Houston, Victor Stuart.....	South Dakota.....	Sept. 22, 1893	2	0
Jenson, Henry Norman.....	Wisconsin.....	Sept. 6, 1893	2	0
Jones, Northam Lee.....	Mississippi.....	Sept. 6, 1893	2	0
Kantz, Austin.....	Washington.....	May 19, 1893	6	0
Kernan, Ernest Clinton.....	New York.....	Sept. 6, 1893	2	0
Kempff, Clarence Selby.....	California.....	May 19, 1893	6	1
Landis, Irwin Franklin.....	Kansas.....	Sept. 6, 1893	2	0
Leahy, William Daniel.....	Wisconsin.....	May 19, 1893	6	0
McCarthy, Albert Henry.....	Iowa.....	Sept. 6, 1893	2	0
McDowell, Willis.....	Pennsylvania.....	May 19, 1893	6	4
Magill, Samuel George, Jr.....	North Dakota.....	May 19, 1893	6	0
Mahony, Daniel Sullivan.....	Michigan.....	Sept. 6, 1893	2	0
Miller, Cyrus Robinson.....	California.....	Sept. 6, 1893	2	0
Morse, John Wier.....	Massachusetts.....	Sept. 6, 1893	2	0
Murfin, Orin Gould.....	Ohio.....	Sept. 6, 1893	2	0
Naylor, Charles Jacob.....	Pennsylvania.....	Sept. 6, 1893	2	0
Oversatree, Luther Martin.....	Nebraska.....	Sept. 6, 1893	2	0
Owen, Alfred Crosby.....	District of Columbia.....	Sept. 6, 1893	2	0
Owens, Charles Truesdale.....	Pennsylvania.....	Sept. 6, 1893	2	0
Perrill, Harlan Page.....	Indiana.....	Sept. 6, 1893	2	0
Powell, Joseph Wright.....	New York.....	May 19, 1893	6	0
Pratt, Peter Lloyd.....	Illinois.....	May 19, 1893	6	4
Prosser, Alfred Warren.....	Nebraska.....	May 19, 1893	6	15
Reynolds, William Herbert.....	Georgia.....	Sept. 6, 1893	2	0
Richardson, Louis Clark.....	South Carolina.....	Sept. 6, 1893	2	0
Rochie, Clifton Charles.....	Maryland.....	Sept. 6, 1893	2	0
Rogers, Leonard Russell.....	Minnesota.....	Sept. 6, 1893	2	0
Saxton, Walton Roswell.....	Illinois.....	May 19, 1893	6	0

Naval Cadets of the Second Class—59 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Sheffield, Fletcher Lamar.....	Georgia.....	Sept. 6, 1893	3	8
Smith, Arthur St. Clair, jr.....	Iowa.....	Sept. 6, 1893	3	7
Terry, Joseph Dandridge.....	Virginia... ..	May 19, 1893	6	4
Theleen, David Elias.....	Wisconsin.....	Sept. 6, 1893	3	7
Van Orden, George.....	Michigan.....	May 19, 1893	6	5
Webber, George.....	Arkansas.....	Sept. 6, 1893	3	7
Wessels, Arthur Lewis.....	Iowa.....	May 19, 1893	6	4
White, William Russell.....	Arizona.....	Sept. 6, 1893	3	6
Williams, Hilary.....	Indiana.....	Sept. 6, 1893	3	8
Yarnell, Harry Ervin.....	Iowa.....	Sept. 6, 1893	3	8

Naval Cadets of the Third Class—60 members.

Name.	State from which appointed.	Date of admission.	Time served in present ship.	
			Months.	Days.
Abele, Clarence Arthur.....	Massachusetts.....	Sept. 6, 1894	2	28
Applewhite, Scott Carter.....	Indiana.....	May 19, 1894	5	25
Arnold, William Wood.....	New Jersey.....	May 19, 1894	5	25
Babcock, John Franklin.....	New York.....	Sept. 22, 1894	2	23
Boune, Charles.....	Ohio.....	Sept. 6, 1894	2	23
Briggs, Wilbur Gerheart.....	New York.....	Sept. 6, 1894	2	23
Briggs, Zeno Everett.....	Nebraska.....	Sept. 22, 1894	2	23
Brockway, Benjamin Little.....	South Carolina.....	Sept. 6, 1893	2	19
Brown, George, jr.....	At large.....	Sept. 6, 1893	2	29
Brown, Josephus Jarvis.....	Illinois.....	Sept. 6, 1894	2	19
Brown, Morris Hamilton.....	Indiana.....	May 19, 1894	5	26
Constien, Edward Theodore.....	Pennsylvania.....	May 19, 1894	:	:
Cotten, Lyman Atkinson.....	North Carolina.....	Sept. 6, 1894	2	11
Cronan, William Pigott.....	Connecticut.....	Sept. 6, 1894	2	11
Dinger, Henry Charles.....	Wisconsin.....	May 19, 1894	5	16
Eason, Herman Jacob.....	Mississippi.....	May 19, 1894	5	16
England, William Herbert.....	Arkansas.....	Sept. 6, 1894	2	11
Evans, Frank Taylor.....	At large.....	Sept. 6, 1894	2	13
Faller, Guy William.....	Wisconsin.....	May 19, 1894	5	16
Farrin, Thomas Benjamin, jr.....	Illinois.....	Sept. 22, 1894	2	13
Gilmer, James Blair.....	Virginia.....	May 19, 1894	5	16
Graham, John Sisson.....	Colorado.....	May 19, 1894	5	16
Halligan, John, jr.....	Massachusetts.....	Sept. 6, 1894	2	12
Hand, James Alexander, jr.....	South Dakota.....	Sept. 6, 1894	2	17
Hanrahan, David Carlisle.....	Wisconsin.....	May 19, 1894	5	16
Hord, Oliver Saunders.....	Kentucky.....	May 19, 1894	5	16
Hunter, Charles Milton.....	Ohio.....	May 19, 1894	5	16
Huntington, Arthur Franklin.....	New York.....	Sept. 12, 1894	2	23
Johnson, Thomas Lee.....	Kansas.....	May 19, 1894	5	16
Kruse, James Chatham.....	Pennsylvania.....	Sept. 6, 1894	2	13
Lehfeldt, Henry August.....	Wisconsin.....	May 19, 1894	5	16
Love, James Monroe, jr.....	Virginia.....	Sept. 6, 1894	2	23
McIntyre, Edward William.....	California.....	Sept. 6, 1894	2	13
Mary, Clyde Samuel.....	Missouri.....	Sept. 6, 1894	2	23
Madison, Zachariah Harvey.....	Illinois.....	Sept. 6, 1894	2	11
Mannix, Daniel Pratt.....	Ohio.....	Sept. 6, 1894	2	13
Marble, Ralph Norris, jr.....	Minnesota.....	May 19, 1894	5	16
Mitchell, Alexander Neely.....	Ohio.....	Sept. 6, 1894	2	23
Nelson, Charles Preston.....	Massachusetts.....	May 19, 1894	5	16
Peterson, Roscoe Lloyd.....	Michigan.....	June 1, 1894	5	16
Pettengill, George Tilford.....	Idaho at large.....	Sept. 22, 1894	2	23
Pinney, Frank Lucius.....	Connecticut.....	Sept. 6, 1894	2	13
Purce, Henry Ashby.....	Georgia.....	Sept. 6, 1894	2	23
Raper, Walter Gordon.....	Georgia.....	Sept. 22, 1894	2	23
Rutledge, Carl Clyde.....	Ohio.....	May 19, 1894	5	16
Schofield, John Anderson.....	Missouri.....	Sept. 6, 1894	2	23
Shane, Louis.....	Nebraska.....	Sept. 6, 1894	2	11
Smith, George Leonard.....	New Hampshire.....	Sept. 6, 1894	2	23
Stetson, George Cook.....	New York.....	Sept. 22, 1894	2	23

Naval Cadets of the Third Class—50 members—Continued.

Name.	State from which appointed	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Tardy, Walter Benjamin.....	Arkansas.....	May 19, 1894	5	16
Tarrant, William Theodore.....	Texas.....	Sept. 6, 1894	2	23
Taylor, Hugh Kirkpatrick.....	Ohio.....	Sept. 22, 1894	2	23
Thorpe, George Cyrus.....	Minnesota.....	May 19, 1894	4	23
Watts, William Carleton.....	Pennsylvania.....	Sept. 22 1894	2	23
Wells, William Benefiel.....	Iowa.....	May 19, 1894	5	16
Williams, Henry.....	Maryland.....	Sept. 6, 1894	2	23
Williams, Yancey Sullivan.....	South Carolina.....	Sept. 6, 1894	2	23
Woods, Edward.....	Massachusetts.....	May 19, 1894	5	16
Wright, Henry Tutwiler.....	Alabama.....	Sept. 6, 1894	2	23

Naval Cadets of the Fourth Class—89 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission		Service in previous class	
			Years.	Months.	Months.	Days.
Asserson, Frederick Ann.....	New York	Sept. 6, 1895	16	4	0	
Bailey, John Eliot.....	Michigan	May 20, 1895	17	10	2	2
Beckner, John Tallafarro.....	Kentucky	May 20, 1895	16	8	2	11
Bird, Owen Stephen.....	At large	May 20, 1895	18	11	2	1
Biswell, Henry Harrison.....	New York	May 20, 1895	19	3	2	
Blaset, Guy Aloysius.....	Kentucky	Sept. 6, 1895	18	1	0	1
Bloch, Claude Charles.....	Kentucky	Sept. 6, 1895	17	2	0	
Bowers, John Treadwell	New Jersey	Sept. 6, 1895	18	3	0	
Bowman, Everett Newton.....	Iowa	Sept. 6, 1895	18	2	0	
Branch, Frank Oak.....	Indiana	Sept. 6, 1895	17	4	0	
Brinsar, Harry Lerch.....	Pennsylvania.....	Sept. 6, 1895	18	9	0	
Buchanan, Allen	Indiana.....	Sept. 6, 1895	18	9	0	1
Buttrick, James Tyler	Rhode Island.....	Sept. 6, 1895	19	11	1	1
Cashman, Frank Paul.....	Mississippi.....	Sept. 6, 1895	18	1	0	1
Case, William Stanhope	Illinois	Sept. 6, 1895	18	1	0	0
Clement, James Wilkinson Legare.....	South Carolina.....	Sept. 27, 1895	17	1	0	1
Cocke, Herbert Claiborne.....	Virginia	May 20, 1895	18	4	2	1
Cole, Cyrus Willard.....	Ohio.....	Sept. 9, 1895	19	2	0	1
Combs, James Rockwell.....	Illinois	Sept. 6, 1895	19	1	0	1
Conger, William Higgins.....	Pennsylvania.....	May 20, 1895	15	4	2	
Courtney, Charles Edward.....	New York	May 20, 1895	17	11	2	
Craighead, Walter Bailey.....	Louisiana.....	Sept. 20, 1895	17	7	1	1
Cressap, Edward (Ohio).....	Florida	May 20, 1895	17	6	2	
Cull, Julius Katey.....	Vermont	May 20, 1895	18	9	2	2
Doyle, Stafford Henry Rahal	South Carolina ..	Sept. 6, 1895	19	4	0	1
Dungan, Paul Baxter.....	Nebraska.....	Sept. 6, 1895	18	2	0	1
Evans, Herbert Heard	Mississippi.....	Sept. 6, 1895	15	3	0	1
Fenner, Edward Blaine	New York.....	May 20, 1895	18	9	2	2
Ferguson, Garland Nevler.....	North Carolina...	May 20, 1895	17	9	2	
Fischer, Charles Hermann.....	Pennsylvania.....	Sept. 6, 1895	19	11	0	1
Forman, Charles William	Illinois	Sept. 6, 1895	18	11	0	1
Frawley, William John	Massachusetts ..	May 20, 1895	18	9	2	
Gillett, Ransom Hooker.....	New York.....	Sept. 6, 1895	18	7	0	1
Gibson, Henry Miller	Kansas	May 20, 1895	18	7	2	1
Greenleaf, John Willis	Ohio	May 20, 1895	15	4	2	
Hatch, Charles Byron.....	Illinois	Sept. 6, 1895	17	1	0	1
Helm, Frank Pinckney, jr	Kentucky	May 20, 1895	18	2	2	
Horne, Frederick Joseph Jr	New York	May 20, 1895	15	2	2	
Horn, Frank John	Illinois	Sept. 20, 1895	15	6	1	1
Hunt, Walter Merrill	Maine	Sept. 6, 1895	18	11	0	
Irwin, Algernon Charles	Ohio	Sept. 6, 1895	18	2	0	1
Jeffers, William Nicholas	New York	Sept. 20, 1895	18	6	0	1
Johnson, Alfred Wilkinson.....	At large	May 20, 1895	18	6	2	2
Kalbue, Edward Clifford.....	At large.....	May 20, 1895	17	6	2	
Kearny, Philip	Missouri	Sept. 6, 1895	17	8	1	
Kimberly, Victor Ashfield.....	Massachusetts ..	Sept. 6, 1895	17	10	0	1
Lackey, Henry Ellis	At large.....	May 20, 1895	18	11	2	
Larimer, Edgar Brown	Kansas	Sept. 6, 1895	19	1	0	
Le, John Earl	Minnesota	Sept. 6, 1895	17	2	0	1
Learty, Sterling Hicks.....	Missouri.....	Sept. 6, 1895	19	8	0	0

Naval Cadets of the Fourth Class—89 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Years.	Months.
Magnire, Charles Lorenzo.....	Missouri.....	May 20, 1895	17	3	2	23
Major, Samuel Ira Morgan.....	Kentucky	Sept. 6, 1895	18	0	0	0
Mathews, James Edward	Illinois	May 20, 1895	19	4	2	23
Miller, William Siebel.....	Texas	Sept. 20, 1895	18	9	0	0
Montgomery, Russell	Oregon	Sept. 6, 1895	17	9	0	0
Morgan, Charles Elmer.....	West Virginia.....	Sept. 6, 1895	18	7	0	0
Morris, Thomas Jefferson.....	Ohio	May 20, 1895	19	3	2	23
Morrison, Farmer.....	Arkansas.....	Sept. 6, 1895	19	7	0	0
Muir, John Church.....	California	Sept. 6, 1895	16	5	0	0
Northup, Arthur Weed	Ohio	Sept. 6, 1895	17	1	0	0
Osterhout, Frank Marcy	Montana, at large.	Sept. 6, 1895	18	5	0	0
Parrish, John William Cardell.....	Indiana.....	Sept. 6, 1895	16	5	0	0
Pope, Ralph Elton	Nebraska.....	May 20, 1895	19	4	2	23
Royall, Hilary Herbert.....	Alabama	May 20, 1895	18	9	2	23
Sadler, Everit Jay	Kansas	Sept. 20, 1895	16	4	0	0
Savidge, Albert Clinton.....	Pennsylvania.....	May 20, 1895	15	1	2	23
Sayles, William Randall.....	Rhode Island.....	May 20, 1895	17	5	2	23
Schmidt, Oscar	Indiana.....	May 27, 1895	16	8	2	23
Shackford, Chauncey	New Jersey.....	Sept. 6, 1895	18	5	0	0
Shapley, Lloyd Stowell.....	Missouri.....	May 30, 1895	19	6	2	23
Smith, Clyde Wilbur.....	Iowa.....	Sept. 6, 1895	16	10	0	0
Sparrow, Herbert George.....	Ohio	Sept. 6, 1895	18	1	0	0
Taussig, Joseph Knefler	At large	May 30, 1895	17	9	2	23
Thomas, Samuel Brown.....	At large	May 30, 1895	17	4	2	23
Tomb, James Harvey	Missouri.....	Sept. 6, 1895	19	0	0	0
Turner, Robert Francis.....	Iowa.....	Sept. 6, 1895	19	8	0	0
Vernon, Walter Newhall.....	Oregon	May 20, 1895	17	3	2	23
Vincent, Roe Willis.....	Pennsylvania.....	Sept. 6, 1895	18	4	0	0
Watson, Adolphus Eugene.....	At large	May 30, 1895	16	9	2	23
Weichert, Ernest Augustus	Connecticut	Sept. 6, 1895	17	11	0	0
Wells, Daniel Hamner	Utah, at large.....	Sept. 6, 1895	19	11	0	0
West, Arthur Stuart.....	Georgia.....	May 20, 1895	16	2	2	23
White, Richard Drace	Missouri	May 20, 1895	18	1	2	23
Wood, Robert Thompson.....	New York.....	May 20, 1895	16	0	2	23
Wood, Welborn Cicero.....	Georgia.....	Sept. 6, 1895	19	8	0	0
Woodward, Clark Howell, jr.....	Georgia.....	Sept. 6, 1895	18	6	0	0
Wright, Luke Edward.....	Tennessee	May 20, 1895	17	11	2	23
Wyman, Henry Lake.....	Illinois	Sept. 6, 1895	16	9	0	0
Yates, Fred Hammond.....	Maine	May 20, 1895	16	4	2	23

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

		October, 1895.	Members.
First Class	Line Division.....	26	38
	Engineer Division.....	12	
Second Class.....			59
Third Class.....			59
Fourth Class.....			89
Total			245

RELATIVE STANDING OF NAVAL CADETS FOR 1894-'95.

Classes of the Naval Cadets at the United States Naval Academy, at the close of the Academic Year 1894-'95; with the relative standing of the members in each class, as determined at the Annual Examination, June, 1895.

P Physically disqualified for the naval service.

** Received 85 per cent of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

§ Found deficient, and recommended to be dropped.

a Absent from examination.

e Selected for Engineer Division.

w Found deficient, warned.

Relative Standing of the Naval Cadets of the First Class

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years	Months
29	Bagley, Worth	North Carolina.....	Sept. 7, 1891	17	.
2	Baldwin, Frank Pardee.....	New Jersey	Sept. 8, 1891	17	.
18	Bannon, Philip Michael	Maryland.....	May 19, 1891	19	:
17	Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1891	18	.
21	Bennett, Kenneth Maratt.....	New Jersey.....	Sept. 8, 1891	16	.
20	Breckinridge, Joseph Cabell.....	Kentucky	Sept. 8, 1891	19	.
4	Brumby, Frank Hardeman.....	Georgia.....	Sept. 8, 1891	16	.
8	Butler, Henry Varnum, Jr.....	New York	Sept. 5, 1891	17	.
14	Chester, Arthur Tremaine.....	At large	May 19, 1890	15	.
10	Cushman William Reynolds.....	New York	Sept. 5, 1891	16	.
3	Davison, William Christopher ...	South Dakota.....	Sept. 29, 1891	19	:
23	Gherardi, Walter Rockwell	At large	Sept. 4, 1891	16	.
5	Groesbeck, William Gerard	Ohio	Sept. 4, 1891	17	.
25	Hall, Newt Hamill.....	Texas.....	Sept. 7, 1891	18	.
16	Johnston, Rufus Zenas, Jr.....	North Carolina.....	Sept. 10, 1891	17	:
11	Klemann John Valentine	New York	Sept. 10, 1891	15	.
22	Koepper Orlo Smith	Pennsylvania.....	Sept. 4, 1891	16	:
6	Laning, Harris.....	Illinois	May 19, 1891	17	.
19	Mc Cormack, Michael James	Michigan	Sept. 8, 1891	17	.
7	Monaghan, John Robert	Washington	Sept. 7, 1891	18	:
15	Raby, James Joseph.....	Michigan	Sept. 9, 1891	16	.
27	Sayer, Joseph Draper, Jr	New York	Sept. 5, 1891	16	.
31	Smith, Stuart Farrar	Pennsylvania.....	Sept. 4, 1891	16	.
14	Standley, William Harry	California.....	Sept. 7, 1891	16	.
12	Todd, David Wooster	California.....	Sept. 8, 1891	17	:
20	Vestal, Samuel Curtis	Indiana.....	May 19, 1891	16	:
24	Walsham, Albion James.....	New York	Sept. 4, 1891	16	.
9	Walker, James Erling	North Carolina	Sept. 7, 1891	17	.
26	Watson, Edward Howe	Kentucky	Sept. 7, 1891	17	.

Line Division—29 members—Annual Examination, June, 1895.

Order of merit in—											Number of demerits.	Sea service in practice ships.		Order of annual merit.
Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Efficiency.	Conduct.		Months.	Days.	
27	17	28	24	6	25	26	22	9	10	28	101	5	15	28
3	7	2	4	3	6	2	10	9	2	13	36	5	15	2
13	3	26	22	24	25	15	24	24	3	12	33	8	8	18
19	22	13	11	26	7	10	17	28	25	23	68	5	2	17
24	10	19	20	25	21	21	18	13	21	18	52	5	15	21
29	21	29	28	4	18	28	1	19	21	27	97	5	15	29
6	22	3	1	1	5	9	4	14	27	6	22	5	11	4
8	4	7	15	15	10	5	29	16	4	8	31	5	15	8
9	9	12	16		12	15	26	22	7	13	38	5	25	13
12	5	14	7	17	2	19	21	5	15	21	66	5	15	10
1	12	4	9	2	11	4	4	2	5	5	22	5	11	3
16	16	24	22	22	29	25	20	18	12	15	43	5	15	23
5	14	4	3	5	3	3	11	27	13	20	57	5	15	5
28	24	27	24	13	15	21	16	26	17	7	16	2	22	25
14	15	9	13	22	25	14	24	17	17	22	70	5	15	16
11	26	11	10	17	8	11	12	11	29	11	31	5	15	11
21	29	17	16	21	20	18	27	15	28	19	53	5	15	22
3	2	6	5	9	14	7	9	8	7	2	13	8	4	6
22	19	22	29	20	24	26	8	1	7	1	7	5	15	19
16	25	9	7	8	4	8	3	19	21	9	31	5	15	7
22	8	21	11	12	16	12	23	19	17	3	16	5	15	15
26	28	23	26	26	22	24	6	5	26	20	81	5	15	27
2	1	1	2	7	1	1	2	7	1	4	16	5	4	*1
16	6	16	20	17	17	13	14	4	5	9	32	5	15	14
7	13	15	14	10	25	21	15	3	11	15	43	4	18	12
14	26	20	18	28	12	20	7	29	24	17	53	8	8	20
20	19	18	19	13	18	15	28	12	13	25	88	5	15	24
10	10	8	6	10	9	6	19	23	15	24	76	5	15	9
25	18	25	27	29	23	29	13	24	20	25	87	4	15	26

RELATIVE STANDING—

Relative Standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission	
				Years	Months
• 2	Dick, Thomas Herritt	South Carolina	Sept. 5, 1891	14	
11	Dunn, Edward Howard	Connecticut	Sept. 5, 1891	16	
12	Eckhardt, Ernest Frederick	Wisconsin	Sept. 5, 1891	14	
5	Freeman, Frederick Newton	Indiana	Sept. 9, 1891	13	
3	Garrison, Daniel Mershon	New Jersey	June 1, 1891	17	
6	Karns, Franklin D.	Ohio	Sept. 30, 1891	17	
• 1	Mallery, Charles King	Tennessee	Sept. 25, 1891	14	
4	Mansfield, Newton	Ohio	Sept. 7, 1891	17	
10	Marshall John Francis, jr.	Texas	Sept. 8, 1891	17	
9	Merritt, Darwin Robert	Iowa	Sept. 10, 1891	19	
8	Morton, James Proctor	Missouri	Sept. 9, 1891	17	
7	Walker, Charles Henry	Massachusetts	Sept. 8, 1891	17	

Engineer Division—12 members—Annual Examination, June, 1895.

Sea service.		Order of merit in—										Number of demerits.	Order of annual merit.
Months.	Days.	Naval construction.	Designing machinery.	Marine engines.	Bollers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Efficiency.	Conduct.		
4	17	2	1	2	2	1	2	3	6	2	1	19	*2
5	15	11	11	9	11	10	12	11	7	11	11	105	11
5	15	10	12	12	12	10	7	12	10	12	12	149	12
4	17	8	5	4	5	8	8	7	6	6	5	46	5
7	8	4	3	3	3	4	4	2	3	5	7	80	3
4	17	6	7	6	6	4	5	5	1	4	4	29	6
4	17	1	1	1	1	4	1	1	9	2	2	27	*1
4	17	3	4	7	3	1	6	4	4	1	6	67	4
4	17	9	10	11	7	10	10	10	11	10	8	77	10
4	17	12	9	10	10	7	9	9	8	9	9	92	9
4	17	5	8	5	9	8	3	6	12	7	10	102	8
4	17	7	6	8	8	1	11	8	2	8	2	27	7

Relative Standing of the Naval Cadets of the Naval

Order of annual merit.	Name.	State from which appointed.	Date of admission	
			Month	Day
12	Bissett, Henry Overstreet.....	Maryland	Sept	6
1	Bronson, Amon, jr.....	Nebraska	Sept	7
26	Burt, Charles Perry.....	Georgia.....	Sept	6
29	Castleman, Kenneth Galleher.....	Kentucky	Sept	6
18	Cluverius, Wat Tyler, jr.....	Louisiana	May	10
4	Craven, Thomas Tingey	New Hampshire.....	Sept	1
25	Crenshaw, Arthur	Alabama.....	Sept	4
24	Curtis, Roland Irvin.....	Pennsylvania.....	Sept	4
5	Doak, Henry Melville, jr.....	Tennessee	Sept	5
9	Earle, Ralph	Massachusetts	Sept	4
19	Ellis, Mark Saint Clair.....	Arkansas.....	July	1
14	Fitzgerald, Edward Thomas.....	Texas.....	Sept	1
28	Gilpin, Charles Edward.....	Michigan	Sept	4
5	Hauenstein, George Jacob.....	Mississippi	Sept	4
36	Henry, James Buchanan, jr	New York.....	Sept	4
2	Holden, Jonas Hannibal.....	Vermont.....	May	20
27	Jenao, Earl Percy.....	West Virginia.....	Sept	6
18	Jones, Junius Henry.....	Virginia.....	Sept	1
8	Kalbach, Andrew Edwin.....	Pennsylvania	July	1
17	Kearney Thomas Albert.....	Missouri.....	Sept	6
16	Kimball, Henry Swift.....	Massachusetts.....	Sept	6
25	Knox, Dudley Wright.....	Tennessee	Sept	6
23	Leiper, Charles Lewis.....	Pennsylvania	Sept	6
27	Lincoln Gatewood Sanders.....	Missouri.....	May	27
31	Littlefield, William Lord.....	Massachusetts.....	Sept	2
24	MacArthur, Arthur jr., jr.....	Wisconsin.....	Sept	2
30	McCauley, Edward, jr.....	New York.....	Sept	1
20	Marshall Albert Ware.....	Texas	Sept	6
12	Middleton, George Izard	South Carolina.....	Sept	5
32	Mustin, Henry Croakey	Tennessee	Sept	6
22	Palmer, Leigh Carlyle.....	Missouri	Sept	6
6	Poor, Charles Longstreet.....	New York.....	Sept	4
21	Rice George Benjamin.....	Kentucky	Sept	6
23	Ridgely Frank Eugene	At large	Sept	6
1	Robinson, Richard Hallett	Ohio	Sept	6
1	Roy, John Halley	New York.....	Sept	4
11	Toser, Charles Maxson	New York.....	Sept	10
5	Walker, Ralph Eric	Indiana	May	2
20	Washington, Pope	North Carolina	Sept	7
15	Wattengel Ivan Cyrus	Colorado	Sept	6
13	Wood Duncan Malua	Alabama	Sept	2
20	Wurtelbaugh Daniel Willert	Texas	May	20

Class—42 members—Annual Examination, June, 1895.

Age at date of admission.		Order of merit in—										Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Efficiency.	Conduct.		
19	10	28	8	24	33	9	6	7	36	27	8	49	e 12
16	0	36	37	40	42	18	34	34	38	42	42	199	†
17	2	15	24	22	12	33	25	21	24	27	26	80	e 26
16	5	32	26	37	14	35	9	18	17	6	40	153	e 29
17	4	20	15	15	30	20	10	14	38	31	27	80	18
19	2	1	13	7	5	3	14	16	6	3	17	63	4
17	6	39	41	37	26	35	39	40	40	14	12	01	e 35
18	3	30	35	27	41	23	31	41	30	41	37	144	34
17	3	41	31	41	35	40	36	38	42	36	32	108	§
18	4	10	10	4	35	12	10	14	6	23	8	47	9
19	3	24	22	18	12	16	23	17	20	38	22	72	19
17	11	9	14	7	0	15	18	28	12	19	12	57	e 14
19	9	22	40	30	18	27	38	1	10	8	15	58	28
16	11	34	37	39	33	40	40	31	32	40	16	64	§
16	8	34	33	35	30	38	32	38	35	39	36	137	e 36
19	1	1	5	2	1	11	7	19	2	1	1	19	2
19	0	16	25	28	18	27	27	26	34	25	10	54	27
18	2	(a)	(a)	(a)	23	(a)	(a)	(a)	17	23	2	26	Pa.
19	10	22	6	14	0	4	4	12	21	7	7	50	8
17	6	17	18	16	6	30	18	20	16	5	4	37	17
18	7	14	18	19	3	24	18	11	13	2	21	70	16
15	2	21	26	30	24	26	23	33	5	25	6	49	25
16	6	3	10	3	14	5	2	3	4	14	22	71	e 3
16	9	4	0	0	14	6	3	10	37	13	24	71	e 7
18	9	33	36	30	2	25	27	27	9	14	39	170	e 31
16	3	30	17	26	20	16	18	28	14	29	30	88	24
17	1	27	26	29	38	32	33	23	28	10	24	76	30
18	5	25	18	19	26	19	17	37	20	18	11	55	e 20
17	7	23	21	21	8	27	26	6	21	36	17	65	P 21
18	7	19	30	25	39	35	30	30	1	33	41	170	32
19	7	18	29	13	9	21	20	12	15	8	33	110	22
18	11	6	3	4	26	8	8	2	17	11	12	60	6
19	4	40	39	34	24	33	40	34	41	35	38	154	†
17	2	26	22	17	14	21	22	9	31	22	34	108	23
17	5	8	1	1	7	1	1	4	8	3	5	41	* 1
15	4	36	31	33	30	39	35	21	33	20	35	132	e †
16	2	13	4	12	20	10	16	24	23	14	20	65	11
15	8	11	2	6	26	2	5	4	11	21	31	97	5
19	11	38	34	35	35	31	37	36	28	33	29	86	e 33
16	3	4	6	11	20	14	13	8	26	29	28	81	15
15	11	6	16	10	39	13	14	31	3	31	17	63	13
19	3	12	12	23	3	7	12	24	25	11	3	36	10

Relative Standing of the Naval Cadets of the Fleet

(Order of annual merit.)	Name.	State from which appointed.	Date of admission.
34	Anding, Sheldon Webb.....	Mississippi.....	May 19 1901
36	Anderson, William Christian.....	New York.....	Sept 22 1901
37	Bagby, Robert Coleman.....	Missouri.....	Sept 22 1901
19	Boyd, David French, jr.....	Alabama.....	May 19 1901
55	Bryant, Samuel Woods.....	Pennsylvania.....	May 19 1901
9	Chase, Gilbert.....	Virginia.....	Sept 6 1901
28	Collins, Henry Lafayette.....	Pennsylvania.....	Sept 6 1901
W	Day, John Arthur.....	New York.....	May 19 1901
*1	Du Bose, William Gunnell.....	Georgia.....	Sept 6 1901
50	Duncan, Oscar Dibble.....	Alabama.....	Sept 6 1901
*2	Eggert, Ernest Frederick.....	Michigan.....	Sept 6 1901
48	Falconer, Walter Maxwell.....	Ohio.....	Sept 6 1901
44	Giles, William Pinkney.....	Texas.....	May 19 1901
16	Ginsome, Joseph Wright.....	Pennsylvania.....	Sept 6 1901
41	Graham, Andrew Thomas.....	Illinois.....	Sept 6 1901
26	Hart, Thomas Charles.....	Michigan.....	May 19 1901
40	Henderson, Robert William.....	Ohio.....	Sept 22 1901
14	Hepburn, Arthur Jap.....	Pennsylvania.....	Sept 22 1901
PT	Herndon, Henry Raymond.....	Texas.....	May 19 1901
56	Hilleary, John Francis.....	Maryland.....	Sept 6 1901
71	Holman, Frederic Ralph.....	Iowa.....	May 19 1901
25	Hoopea, Edward Trimble.....	Pennsylvania.....	Sept 6 1901
12	Houston, Victor Stuart.....	South Dakota.....	Sept 22 1901
23	Jenson, Henry Norman.....	Wisconsin.....	Sept 6 1901
6	Jones, Needham Lee.....	Mississippi.....	Sept 6 1901
31	Kautz, Austin.....	Washington.....	May 19 1901
54	Keenan, Ernest Clinton.....	New York.....	Sept 6 1901
45	Kempff, Clarence Selby.....	California.....	May 19 1901
47	Landis, Irwin Franklin.....	Kansas.....	Sept 6 1901
52	Leach, William Daniel.....	Wisconsin.....	May 19 1901
20	McCarthy, Albert Henry.....	Iowa.....	Sept 6 1901
39	McDowell, Willie.....	Pennsylvania.....	May 19 1901
57	Magill, Samuel George, jr.....	North Dakota.....	May 19 1901
24	Mahony, Daniel Sullivan.....	Michigan.....	Sept 6 1901
13	Miller, Cyrus Robinson.....	California.....	Sept 6 1901
46	Moser, John Wier.....	Massachusetts.....	Sept 6 1901
17	Murnu, Orin Gould.....	Ohio.....	Sept 6 1901
58	Naylor, Charles Jacob.....	Pennsylvania.....	Sept 6 1901
11	Overstreet, Luther Martin.....	Nebraska.....	Sept 6 1901
62	Owen, Alfred Crosby.....	District of Columbia.....	Sept 6 1901
51	Owens, Charles Truesdale.....	Pennsylvania.....	Sept 6 1901
*	Perrill, Harlan Page.....	Indiana.....	Sept 6 1901
	Powell, Joseph Wright.....	New York.....	May 19 1901

Class—60 members—Annual Examination, June, 1895.

Age at date of admission.		Order of merit in—								
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.	Number of demerits.	Order of annual merit.
19	6	53	41	41	46	21	37	9	31	34
18	0	51	27	59	44	10	42	34	102	36
16	11	47	41	28	13	58	41	19	58	37
16	8	14	19	19	22	13	12	55	217	19
15	11	56	52	56	30	52	50	40	128	55
19	11	17	8	24	12	4	34	30	67	9
16	9	8	12	46	32	41	31	48	160	28
17	8	39	58	53	4	55	12	60	240	17
16	11	1	3	1	2	14	1	1	3	1
19	1	48	50	57	57	15	59	44	148	50
17	3	2	1	12	5	2	37	23	74	13
17	8	26	46	49	50	17	31	58	226	46
18	1	58	55	47	60	30	11	2	19	44
18	0	39	15	5	14	21	19	21	72	16
19	0	51	25	41	55	34	43	18	51	41
15	11	31	22	27	37	23	21	31	97	26
16	5	35	28	37	33	37	43	39	129	40
15	11	15	5	7	9	34	4	51	174	14
17	4	22	36	15	18	50	29	31	99	127
19	9	53	60	57	54	40	47	34	100	56
19	2	15	31	17	23	32	37	27	85	21
17	9	6	25	50	27	12	50	57	222	25
17	2	29	48	26	1	3	12	38	122	12
17	7	34	56	40	40	23	37	11	39	33
18	9	19	10	2	3	19	22	11	38	6
19	8	29	44	28	21	48	29	16	50	31
17	8	42	56	30	41	60	58	43	137	54
18	11	58	53	45	52	28	8	21	71	45
18	2	24	30	23	45	59	55	40	131	47
18	0	41	35	37	35	51	55	49	172	52
17	8	24	37	19	46	43	12	6	27	30
18	3	31	18	30	41	53	24	27	85	39
17	9	42	47	54	59	41	57	56	212	57
19	8	10	17	4	14	54	47	52	184	24
18	11	20	2	13	10	27	34	44	135	13
18	3	60	59	41	23	44	12	19	57	48
17	4	17	31	16	37	20	17	7	30	17
17	11	57	53	60	41	55	54	42	139	58
19	10	8	14	33	58	1	9	13	42	11
18	0	35	45	33	25	39	53	47	160	42
15	3	27	43	44	46	55	60	46	145	15
18	9	4	5	9	19	38	5	7	29	
16	3	5	12	11	17	8	2	3	22	

Relative Standing of the Naval Cadets of the Third Class—

Order of annual merit.			
	Name.	State from which appointed.	Date of admission.
51	Pratt, Peter Lloyd.....	Illinois.....	May 1 st 1900
10	Preasey Alfred Warren.....	Nebraska.....	May 19 1900
15	Reynolds, William Herbert.....	Georgia.....	Sept. 6 1900
20	Richardson, Louis Clark.....	South Carolina.....	Sept. 6 1900
23	Roehle, Clifton Charles.....	Maryland.....	Sept. 6 1900
22	Sargent, Leonard Rundlett.....	Minnesota.....	Sept. 6 1900
20	Sexton, Walton Roswell.....	Illinois.....	May 19 1900
4	Sheffield, Fletcher Lamar.....	Georgia.....	Sept. 6 1900
34	Smith, Arthur St. Clair, jr.....	Iowa.....	Sept. 6 1900
43	Terry, Joseph Dandridge.....	Virginia.....	May 19 1900
8	Theleen, David Elias.....	Wisconsin.....	Sept. 6 1900
W	Van Orden, George.....	Michigan.....	May 19 1900
38	Webber, George.....	Arkansas.....	Sept. 6 1900
49	Wearle, Arthur Lewis.....	Iowa.....	May 19 1900
18	White, William Russell.....	Arizona.....	Sept. 6 1900
22	Williams, Hilary.....	Indiana.....	Sept. 6 1900
3	Yarnell, Harry Kevin.....	Iowa.....	Sept. 6 1900

60 members—Annual Examination, June, 1895—Continued.

Age at date of admission.		Order of merit in—							Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.		
18	5	53	51	52	27	36	45	49	163	53
19	11	12	4	17	7	15	24	37	98	10
19	4	23	29	22	19	9	17	26	77	15
18	10	13	31	25	46	28	28	5	25	20
16	0	38	21	37	37	11	0	14	45	23
17	1	21	22	6	11	48	46	31	95	22
16	8	45	19	35	35	26	9	29	88	29
17	6	3	7	7	6	17	3	10	36	*4
19	8	31	31	19	50	47	24	16	52	34
19	3	49	22	54	30	46	34	23	73	43
17	10	10	10	10	27	4	19	15	40	8
15	1	45	48	48	52	45	52	59	245	W
16	4	50	37	35	33	31	31	25	74	38
19	10	44	37	50	55	25	22	54	213	49
17	3	27	16	14	14	6	47	52	188	18
18	3	37	40	30	26	32	24	34	92	32
17	10	7	9	3	8	7	6	4	24	*3

Relative Standing of the Naval Cadets of the Year

Order of annual merit.	Name.	State from which appointed	Date of admission	
			Year	Month
24	Abele, Clarence Arthur.....	Massachusetts.....	Sept	1
52	Applewhite, Scott Carter.....	Indiana.....	May	1
38	Arnold, William Wood.....	New Jersey.....	May	1
53	Babcock, John Franklin.....	New York.....	Sept	22
13	Boone, Charles.....	Ohio.....	Sept	1
9	Briggs, Wilbur Gerheart.....	New York.....	Sept	2
81	Briggs, Zeno Everett.....	Nebraska.....	Sept	2
50	Brockway, Benjamin Little.....	South Carolina.....	Sept	1
45	Brown, George, jr.....	At large.....	Sept	1
19	Brown, Josephus Jarvis.....	Illinois.....	Sept	1
21	Brown, Morris Hamilton.....	Indiana.....	May	10
44	Constien, Edward Theodore.....	Pennsylvania.....	May	1
28	Cotten, Lyman Atkinson.....	North Carolina.....	Sept	1
43	Cronan, William Pigott.....	Connecticut.....	Sept	1
20	Dinger, Henry Charles.....	Wisconsin.....	May	10
22	Elaon, Herman Jacob.....	Mississippi.....	May	10
29	England, William Herbert.....	Arkansas.....	Sept	1
20	Evans, Frank Taylor.....	At large.....	Sept	1
40	Faller, Guy William.....	Wisconsin.....	May	10
25	Farrin, Thomas Benjamin, jr.....	Illinois.....	Sept	22
42	Gilmer, James Blair.....	Virginia.....	May	10
1	Graham, John Stason.....	Colorado.....	May	10
12	Halligan, John, jr.....	Massachusetts.....	Sept	1
13	Hand, James Alexander, jr.....	South Dakota.....	Sept	1
1	Hanrahan, David Carlisle.....	Wisconsin.....	May	10
1	Hord, Oliver Saunders.....	Kentucky.....	May	10
20	Hunter, Charles Milton.....	Ohio.....	May	10
1	Huntington, Arthur Franklin.....	New York.....	Sept	22
31	Johnson, Thomas Lee.....	Kansas.....	May	10
24	Kress, James Chatham.....	Pennsylvania.....	Sept	1
1	Lehfeldt, Henry August.....	Wisconsin.....	May	10
16	Love, James Monroe, jr.....	Virginia.....	Sept	1
11	McIntyre, Edward William.....	California.....	Sept	1
29	Macy, Lysons Samuel.....	Missouri.....	Sept	1
46	Madison, Zachariah Harvey.....	Illinois.....	Sept	1
32	Mannix, Daniel Pratt.....	Ohio.....	Sept	1
21	Marble, Ralph Norris, jr.....	Minnesota.....	May	10
25	Merrill, Alexander Newby.....	Ohio.....	Sept	1
26	Nelson, Charles Preston.....	Massachusetts.....	May	10
41	Peterson, Rowan Lloyd.....	Michigan.....	June	1
10	Pettengill, George Clifford.....	Idaho, at large.....	Sept	22
15	Piney, Frank Lucius.....	Connecticut.....	Sept	1

Class—60 members—Annual Examination, June, 1895.

Age at date of admission.		Order of merit in—					Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.		
17	10	22	15	29	51	43	87	24
18	4	52	44	57	52	31	62	52
17	7	36	39	39	3	13	45	38
15	0	48	49	52	45	51	119	53
17	11	10	19	17	8	10	33	13
18	7	13	10	14	27	1	6	9
17	11	27	27	40	17	7	25	31
18	9	47	56	47	33	24	54	50
18	1	48	57	42	1	3	8	45
16	7	23	13	18	24	44	93	19
17	6	23	21	12	36	24	55	21
18	6	42	43	54	36	4	24	44
19	8	14	20	56	6	7	25	26
15	7	45	47	38	41	21	51	43
18	2	17	14	27	57	27	58	20
18	4	30	27	13	41	27	59	22
17	10	55	22	36	59	42	85	39
18	11	33	39	8	20	53	128	80
16	1	29	46	49	49	35	70	40
17	7	45	24	28	45	17	47	35
18	2	53	39	51	27	13	45	48
19	1	56	42	57	20	41	82	†
18	3	2	2	3	20	18	49	* 2
18	11	4	4	7	27	13	44	* 3
18	9	57	57	57	20	54	133	†
18	3	53	54	60	52	60	192	†
19	8	40	50	43	60	59	154	50
17	6	58	55	53	57	57	143	†
19	1	35	27	33	17	23	52	33
17	3	30	38	20	24	50	109	34
18	5	58	33	32	27	52	126	†
19	6	15	23	25	3	12	40	16
17	6	11	7	24	55	13	44	11
17	8	25	26	33	45	24	55	28
17	8	39	48	46	49	47	102	46
16	0	41	30	23	11	30	73	32
15	2	8	33	40	11	36	73	23
18	11	32	18	29	45	11	39	25
17	3	34	50	22	5	30	80	36
17	10	38	59	31	8	49	102	41
16	10	16	5	8	27	58	153	
19	9	9	30	20	15	33	66	

Relative Standing of the Naval Cadets of the Four

Order of annual merit.			
	Name.	State from which appointed.	Date of admission.
37	Purser, Henry Ashby.....	Georgia.....	Sept. 6 :00
42	Roper, Walter Gordon.....	Georgia.....	Sept. 22 :00
14	Rutledge, Carl Clyde.....	Ohio.....	May 19 :00
47	Schofield, John Anderson.....	Missouri.....	Sept. 6 :00
5	Shane, Louis.....	Nebraska.....	Sept. 6 :00
9	Shockley, Augustus Wroten.....	Kansas.....	May 21 :00
12	Smith, George Leonard.....	New Hampshire.....	Sept. 6 :00
34	Sweet, George Cook.....	New York.....	Sept. 22 :00
28	Tardy, Walter Benjamin.....	Arkansas.....	May 19 :00
8	Tarrant, William Theodore.....	Texas.....	Sept. 6 :00
18	Taylor, Hugh Kirkpatrick.....	Ohio.....	Sept. 22 :00
49	Thorpe, George Cyrus.....	Minnesota.....	May 19 :00
4	Watts, William Carleton.....	Pennsylvania.....	Sept. 22 :00
27	Wells, William Benedict.....	Iowa.....	May 19 :00
7	Williams, Henry.....	Maryland.....	Sept. 6 :00
17	Williams, Yancey Sullivan.....	South Carolina.....	Sept. 6 :00
6	Woods, Edward.....	Massachusetts.....	May 19 :00
1	Wright, Henry Tutwiler.....	Alabama.....	Sept. 6 :00

Class—60 members—Annual Examination, June, 1895—Continued.

Age at date of admission.		Order of merit in—							
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.	Number of demerits.	Order of merit.	
16	5	48	37	19	56	9	28	37	
18	11	21	44	50	17	56	141	42	
17	7	43	8	4	11	18	49	14	
18	6	36	53	54	33	32	65	47	
17	4	17	16	1	41	45	96	5	
19	11	60	35	36	11	38	75	6	
18	0	5	24	11	15	27	59	12	
17	3	48	60	48	41	55	138	54	
18	11	26	12	44	24	33	67	28	
16	1	19	6	5	52	30	60	8	
19	7	27	17	14	10	6	22	18	
19	4	44	50	44	36	47	102	49	
15	8	6	3	6	36	39	80	* 4	
17	4	20	32	33	40	21	50	27	
17	0	1	11	25	33	18	49	7	
18	4	11	36	14	27	5	20	17	
18	6	6	8	10	2	46	99	6	
19	8	3	1	1	6	2	10	* 1	

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

October 4, 1894, to October 3, 1895.

APPOINTED ENSIGNS JULY 1, 1895.

Naval Cadet Powelson, Wilfrid Van Nest.....	Class of 1 st
Naval Cadet Montgomery, William Slack.....	Class of 1 st
Naval Cadet Clark, Frank Hodges, jr.....	Class of 1 st
Naval Cadet Ward, Henry Heber.....	Class of 1 st
Naval Cadet Bisset, Eugene Leo.....	Class of 1 st
Naval Cadet Lang, Charles Jonas.....	Class of 1 st
Naval Cadet Campbell, Edward Hale.....	Class of 1 st
Naval Cadet Crosley, Walter Selwyn.....	Class of 1 st
Naval Cadet Glase, William Kern.....	Class of 1 st
Naval Cadet Wilson, Thomas Sheldon.....	Class of 1 st
Naval Cadet Pearson, Henry Allen.....	Class of 1 st
Naval Cadet Jackson, Orton Porter.....	Class of 1 st
Naval Cadet Chadwick, Frank Laird.....	Class of 1 st
Naval Cadet Doddridge, John Schon.....	Class of 1 st
Naval Cadet Olmsted, Percy Napier.....	Class of 1 st
Naval Cadet Fewel, Christopher Catron.....	Class of 1 st
Naval Cadet Upham, Frank Brooks.....	Class of 1 st
Naval Cadet Sticht, John Low.....	Class of 1 st
Naval Cadet Douglas, Richard Spencer.....	Class of 1 st
Naval Cadet McKethan, Alfred Augustus.....	Class of 1 st
Naval Cadet Pratt, Alfred Allen.....	Class of 1 st

APPOINTED ASSISTANT ENGINEERS JULY 1, 1895.

Naval Cadet Penguet, Maurice Berthold.....	Class of 1 st
Naval Cadet Price, Henry Bertrand.....	Class of 1 st
Naval Cadet Trench, Martin Edward.....	Class of 1 st
Naval Cadet Read, Frank De Witt.....	Class of 1 st
Naval Cadet Brady, John Richard.....	Class of 1 st
Naval Cadet Cook, Allen Merriam.....	Class of 1 st
Naval Cadet Pollock, Emmett Riddle.....	Class of 1 st
Naval Cadet Procter, Andre Morton.....	Class of 1 st

APPOINTED ASSISTANT NAVAL CONSTRUCTOR JULY 1, 1895.

Naval Cadet Nutting, Daniel Chaplin, jr.....	Class of 1 st
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APPOINTED SECOND LIEUTENANT U. S. MARINE CORPS, JULY 1, 1895.

Naval Cadet Magill, Louis John.....	Class of 1 st
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HONORABLY DISCHARGED JUNE 30, 1895.

Naval Cadet Elder, Edwin Avery.....	Class of 1 st
Naval Cadet Perry, Joseph Albert *.....	Class of 1 st
Naval Cadet Berry, David Mark *.....	Class of 1 st
Naval Cadet Powell, William Glasgow.....	Class of 1 st

* At own request.

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS. 49

Naval Cadet Ryan, John Paul Joseph.....	Class of 1893
Naval Cadet Holsinger, Gerald Long.....	Class of 1893
Naval Cadet Morris, John Ramsay.....	Class of 1893
Naval Cadet Wells, Chester.....	Class of 1893
Naval Cadet Potter, James Boyd.....	Class of 1893

RESIGNED.

Naval Cadet Bynum, Dixson H., fourth class.....	Oct. 29, 1894
Naval Cadet Deane, Russell A., second class.....	Dec. 18, 1894
Naval Cadet Shay, Louis B., fourth class.....	Dec. 20, 1894
Naval Cadet Webber, Charles H., fourth class.....	Dec. 26, 1894
Naval Cadet Jeffries, James G., fourth class.....	Dec. 28, 1894
Naval Cadet Eisbein, Arthur, fourth class.....	Jan. 4, 1895
Naval Cadet Volkmar, Walter S., second class.....	Jan. 5, 1895
Naval Cadet Caffery, John M., fourth class.....	Jan. 7, 1895
Naval Cadet Mayo, Henry W., third class.....	Jan. 12, 1895
Naval Cadet Pattison, Dilly N., third class.....	Jan. 14, 1895
Naval Cadet Small, Jesse M., fourth class.....	Jan. 17, 1895
Naval Cadet Reifsnider, John, fourth class.....	Jan. 23, 1895
Naval Cadet Ball, William G., fourth class.....	Jan. 24, 1895
Naval Cadet Stogedill, James E., fourth class.....	Jan. 24, 1895
Naval Cadet Field, Francis L., fourth class.....	Jan. 29, 1895
Naval Cadet Blandy, Edwin C., second class.....	Feb. 4, 1895
Naval Cadet Morris, Bennie, fourth class.....	Feb. 5, 1895
Naval Cadet Cooke, Robert P. P., second class.....	Feb. 14, 1895
Naval Cadet McConnell, Richard G., second class.....	Feb. 14, 1895
Naval Cadet Bonnaffon, Sylvester, fourth class.....	Feb. 19, 1895
Naval Cadet McMullen, Stanley H., third class.....	Feb. 26, 1895
Naval Cadet Shelton, Nathan J., third class.....	Feb. 26, 1895
Naval Cadet Sykes, Eugene O., jr., third class.....	Feb. 26, 1895
Naval Cadet Ward, Joshua T., third class.....	Feb. 26, 1895
Naval Cadet Bissell, Henry H., fourth class.....	Feb. 26, 1895
Naval Cadet Durham, Raymond E., fourth class.....	Feb. 26, 1895
Naval Cadet Fox, Linn H., fourth class.....	Feb. 26, 1895
Naval Cadet McCarty, Sterling H., fourth class.....	Feb. 26, 1895
Naval Cadet Moore, William A., fourth class.....	Feb. 26, 1895
Naval Cadet Sayles, William R., jr., fourth class.....	Feb. 26, 1895
Naval Cadet Tottenham, John W., fourth class.....	Feb. 26, 1895
Naval Cadet Turner, Laurin H., fourth class.....	Feb. 26, 1895
Naval Cadet Wilcox, Luther T., fourth class.....	Feb. 26, 1895
Naval Cadet Wells, Horace T., third class.....	Feb. 26, 1895
Naval Cadet Dennett, Stanley P., first class.....	Feb. 27, 1895
Naval Cadet Izard, Walter B., first class.....	Feb. 28, 1895
Naval Cadet Gleason, Henry Miller, fourth class.....	April 24, 1895
Naval Cadet Carver, Marvin, class of 1893.....	June 14, 1895
Naval Cadet Middleton, George I., second class.....	June 14, 1895
Naval Cadet Doak, Henry M., second class.....	June 26, 1895
Naval Cadet Hauenstein, George J., second class.....	June 26, 1895
Naval Cadet Shockley, Augustus W., fourth class.....	June 26, 1895
Naval Cadet Sayers, Joseph D., jr., first class.....	June 30, 1895
Naval Cadet Vestal, Samuel C., first class.....	June 30, 1895
Naval Cadet Herndon, Henry R., second class.....	Oct. 1, 1895
Naval Cadet Jones, Junius H., first class.....	Oct. 3, 1895

WITHDRAWN.

Naval Cadet Takasaki, Motohiko, first class.....	Mar. 13, 1895
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DROPPED.

Naval Cadet Mann, George H., first class.....	Mar. 16, 18
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MERIT ROLLS FOR 1894-'95.

Merit rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 91, showing the relative weights of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-half the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent of the multiple in any year shall be distinguished by a star affixed to their names on the merit rolls." (Regulations U. S. Naval Academy, ¶ 100.)

The diplomas of cadets whose final marks on the graduating merit roll are not less than 85 per cent of the maximum read "passed with distinction;" those whose final marks are between 74 per cent and 85 per cent of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent and 74 per cent of the maximum read "passed."

P Physically disqualified for the naval service.

** Received 85 per cent of the multiple.*

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ At own request.

§ Found deficient, and recommended to be dropped.

|| Resigned June 14, 1896.

¶ Resigned June 30, 1895.

a Absent from examination.

e Selected for engineer division.

w Found deficient, warned.

Order of merit.	NAME.	ASSIGNMENT												Final aggregate.	Assignment
		Seamanship and naval construction.	Ordnance and gunnery.	Navigation and surveying.	Steam machinery, engines, and boilers.	International law.	French, Spanish, and German.	Cruise reports.	Navigation note book, journals, and station bills.	Aggregate for final examination.	Aggregate for four years.	1,000			
	Maxima	56	44	44	20	24	28	16	8	240	760	1,000			
*1	Wilfrid Van Nest Powelson	47.46	41.25	37.95	16.40	20.04	24.43	14.72	7.40	209.65	679.31	888.96	Ensign.		
*2	William Slack Montgomery	43.82	36.19	40.37	14.65	21.84	21.28	14.40	7.60	200.21	674.83	875.04	Ensign.		
3	Edwin Avery Elder	40.18	27.94	36.30	12.60	16.02	20.79	13.76	6.54	174.13	657.01	831.14	Honorably discharged.		
4	Frank Hodges Clark, jr	43.82	36.96	33.44	12.00	18.00	21.77	15.52	6.66	188.17	640.04	828.21	Ensign.		
5	Henry Heber Ward	43.12	36.63	36.08	14.65	19.44	22.96	13.92	6.00	192.80	629.93	822.73	Ensign.		
6	Joseph Albert Perry	48.02	36.08	36.74	16.85	19.14	19.46	14.24	7.60	198.13	621.91	820.04	Honorably discharged.;		
7	Eugene Leo Bisset	41.86	35.42	33.77	12.79	21.84	23.59	10.88	5.66	185.72	620.74	806.46	Ensign.		
8	Edward Hale Campbell	41.72	33.99	38.61	14.80	17.22	21.42	10.72	6.06	184.54	607.86	792.40	Ensign.		
9	Charles Jonas Lang	41.72	31.79	31.24	13.85	18.30	24.33	12.72	5.40	179.85	608.72	788.07	Ensign.		
10	David Mark Berry	45.22	32.12	33.77	13.60	19.50	20.51	14.32	7.40	186.44	599.67	786.11	Honorably discharged.;		
11	Walter Selwyn Croasley	41.72	31.57	25.41	11.20	15.06	20.86	13.76	7.00	166.58	614.33	780.91	Ensign.		
12	William Kern Gise	43.96	30.91	32.01	14.50	19.74	26.18	13.92	5.60	186.82	583.68	770.50	Ensign.		
13	Thomas Sheldon Wilson	40.88	32.67	31.57	15.45	18.72	19.18	13.92	6.00	178.39	587.98	766.37	Ensign.		
14	Henry Allen Pearson	42.56	29.26	32.89	11.30	19.38	21.56	13.92	5.94	176.81	584.66	761.47	Ensign.		
15	Orton Porter Jackson	43.26	34.10	31.02	13.85	19.44	22.33	13.92	6.20	184.12	574.93	759.05	Ensign.		
16	Allen Merriam Cook	42.56	32.78	30.47	14.25	16.50	19.39	13.92	6.06	175.93	582.54	758.47	Assistant Engineer.		
17	Frank Laird Chadwick	41.44	32.01	33.22	10.85	18.36	21.84	14.16	6.74	178.62	577.98	756.60	Ensign.		
18	Louis John Magill	37.66	25.08	21.78	6.95	15.12	23.59	14.40	7.00	151.58	603.89	755.47	Second Lieutenant, U. S. M. C.		
19	John Schon Doddridge	41.16	29.15	29.04	13.70	15.00	19.18	14.24	6.40	167.87	586.75	754.62	Ensign.		
20	Percy Napier Olmstead	42.84	28.27	26.84	12.50	20.40	19.60	13.92	6.54	170.91	575.52	746.43	Ensign.		
21	Christopher Catron Fewel	40.74	29.70	27.28	11.60	18.60	20.51	10.88	5.26	164.57	575.95	740.52	Ensign.		

Merit roll of the Graduating Class of Naval Cadets—Line Division—35 members—at conclusion of Six Years' Course, June, 1895—Continued.

Rank or position.	NAME.		ASSIGNMENT.									
	Naval construction.	(Traverse and gun work).	Navigation and surveying.	Steam machinery, engines, and boilers.	International law.	French, Spanish, and (German).	(Tide reports.	Navigation notes, log books, journals, and station bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.	ASSIGNMENT.
	56	44	44	20	24	24	16	8	240	700	1,000	
22	37.94	28.71	33.66	12.50	17.34	21.42	14.06	6.26	171.91	567.87	739.78	Ensign.
23	41.16	27.61	29.81	12.70	18.06	20.37	12.20	6.80	169.71	561.93	731.64	Ensign.
24	36.40	26.18	28.71	12.55	16.50	20.03	12.92	5.74	160.03	569.02	729.05	Ensign.
25	41.16	23.90	28.49	12.80	19.26	18.48	12.92	5.86	173.66	550.52	724.18	Ensign.
26	43.96	31.57	27.73	12.20	15.06	20.93	10.92	5.74	179.11	541.48	730.50	Ensign.
27	32.20	23.96	23.87	11.05	16.50	22.40	12.96	6.74	149.70	569.83	719.53	Honorably discharged.
28	34.22	25.16	30.36	12.95	16.36	24.60	12.28	5.74	160.60	547.30	716.90	Assistant Engineer.
29	36.40	25.52	27.61	7.70	16.20	21.14	12.84	6.74	155.15	561.25	716.40	Honorably discharged.
30	40.60	29.04	27.17	10.55	18.06	21.84	12.64	5.14	165.04	550.99	716.03	Honorably discharged.
31	39.20	28.38	28.96	7.40	15.42	21.63	12.92	5.34	157.25	558.75	715.60	Honorably discharged.
32	36.40	26.73	26.96	10.85	16.02	19.18	12.56	6.26	154.96	555.53	710.48	Honorably discharged.
33	38.36	28.28	30.91	10.36	15.72	20.23	12.40	6.26	162.61	543.79	704.40	Honorably discharged.
34	44.06	31.02	30.47	14.25	15.90	21.42	11.44	6.14	175.30	516.99	692.29	Assistant Engineer.
1	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	532.88	.....

Merit roll of the Graduating Class of Naval Cadets—Engineer Division—6 members—at conclusion of Six Years' Course, June, 1895.

MERIT ROLL—GRADUATING CLASS.

Order of merit.	NAME.	ASSIGNMENT.									
		Naval construction.	Marine engines.	Designing machinery.	Boilers.	French, Spanish, and German.	Cruise reports.	Journals and station bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.
	Maxima.....	32	72	36	40	28	16	16	240	760	1,000
1	Maurice Berthold Pengnet	23.92	62.82	25.38	32.00	27.86	14.08	14.80	200.86	612.42	813.28
2	Henry Bertrand Price.....	27.04	54.54	27.45	29.50	23.73	14.08	16.00	192.34	589.38	781.72
3	Martin Edward Trench	24.96	59.22	30.51	30.80	19.95	14.16	14.92	194.52	586.03	780.55
4	Frank DeWitt Read.....	23.44	60.84	27.18	33.40	21.84	14.16	16.00	196.86	560.22	757.08
5	John Richard Brady	25.12	52.56	30.06	25.80	20.51	12.52	13.44	180.01	565.22	745.23
	Daniel Chaplin Nutting, jr.....	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	661.53	

NOTE.—Naval Cadet Daniel Chaplin Nutting, jr., appointed assistant constructor, did not appear at the final graduating examination.

Merit roll for the four years ending June, 1894, of the Naval Cadets of the Class appointed in 1890, now performing required service afloat—Line Division—54 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	760
1	William P. Robert.....	69.78	141.49	204.90	277.36	693.53
2	Daniel H. Cox	68.79	138.06	202.34	282.73	691.92
3	Iris Van G. Gillis.....	66.37	132.75	198.08	272.45	670.65
4	Thomas G. Roberts.....	70.31	138.61	196.60	244.79	650.31
5	David F. Sellers.....	65.04	131.28	197.58	252.96	646.86
6	Lawrence S. Adams.....	59.82	129.59	194.96	282.20	666.57
7	Raymond Stone.....	66.92	132.41	184.83	264.53	648.69
8	John T. Tompkins	67.80	132.17	189.90	259.45	649.32
9	Ridley McLean	67.23	129.62	192.29	251.26	640.40
10	Charles Webster.....	65.20	125.67	188.74	261.90	641.51
11	Procorat Rabin	64.73	130.86	185.72	244.08	625.39
12	L. Burton Jones	64.37	129.39	167.26	244.46	605.48
13	Simon P. Fullinwider.....	62.72	127.42	179.17	235.16	604.47
14	Stephen V. Graham.....	63.12	123.59	169.13	237.22	593.06
15	Ernest L. Bennett.	63.66	124.29	171.16	221.43	580.54
16	John McC Luby	60.04	117.41	171.73	225.83	575.01
17	Frits L. Sandoz.....	65.48	122.18	169.20	227.20	584.06
18	Gilbert S. Galbraith.....	56.00	121.30	170.14	222.93	570.37
19	Melville J. Shaw	66.87	125.11	162.19	229.06	583.23
20	Arthur G. Kavanagh.....	62.27	118.61	173.39	217.56	571.83
21	Charles S. Bookwalter.....	57.60	113.80	169.74	229.43	570.57
22	William P. Scott.....	57.59	113.36	169.72	224.75	565.42
23	Carlton F. Snow	55.44	112.31	167.71	224.72	559.18
24	Robert H. Osborn	59.01	118.95	165.90	225.15	569.01
25	Roscoe Spear.....	61.07	119.08	163.84	229.74	573.73
26	Walter J. Manson.....	66.12	116.27	164.18	217.20	563.77
27	Robert W. McNeely.....	59.65	115.28	167.23	229.26	571.42
28	Walter S. Turpin	54.68	112.54	163.24	229.86	559.32
29	Roscoe C. Bulmer	54.00	115.00	160.52	227.29	556.81
30	William S. Whitted.....	57.31	113.02	166.54	222.45	559.32
31	George L. P. Stone.....	54.54	113.30	163.55	224.19	555.58
32	George E. Geim	53.68	113.06	163.89	221.20	551.83
33	Clarence England.....	54.85	108.89	154.69	218.79	537.22

Merit roll for the four years ending June, 1894, of the Naval Cadets of the Class appointed in 1890, now performing required service afloat—Engineer Division—13 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggre- gate for four years.
	Maxima.....	76	152	228	304	760
1	John M. Hudgins.....	61.95	128.30	186.23	251.42	627.90
2	Boling K. McMorris.....	61.06	121.17	174.23	244.80	601.26
3	Alfred W. Hinds.....	61.50	123.08	171.57	231.99	588.14
4	Roscoe C. Moody.....	58.60	118.52	172.62	238.28	588.02
5	Ignatius T. Cooper.....	62.31	119.44	166.80	232.10	580.65
6	Henry T. Baker.....	57.50	122.57	168.53	231.25	579.85
7	Ralph H. Chappell.....	56.40	115.43	171.26	236.17	579.26
8	Leland F. James.....	61.15	119.63	162.45	235.48	578.71
9	Frank Lyon	56.45	111.45	166.43	228.81	563.14
10	Joseph M. Reeves.....	55.29	118.73	170.74	217.17	561.93
11	Hutch I. Cone.....	59.13	115.75	161.42	222.91	559.21
12	Emory Winship.....	58.84	114.78	159.00	220.79	553.41
13	Edwin H. De Lany.....	53.96	99.22	150.33	208.06	511.57

Merit roll for the four years ending June, 1895, of the Naval Cadets of the Class appointed in 1891, now performing required service afloat—Line Division—29 members.

Order of general merit for four years.	NAME	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	560
*1	Stuart F. Smith.....	71.49	139.99	206.21	282.26	699.95
*2	William G. Groesbeck.....	70.34	139.58	195.19	252.67	657.80
3	Frank H. Brumby.....	64.76	130.12	184.17	258.23	637.28
4	Frank P. Baldwin.....	60.71	127.49	187.52	254.98	630.70
5	William C. Davidson.....	63.49	125.24	179.26	254.92	622.91
6	Harria Laning.....	61.28	119.51	182.45	256.79	619.03
7	Philip M. Bannon.....	63.96	128.01	182.16	239.79	613.92
8	Arthur T. Chester.....	57.38	125.67	169.99	217.05	572.19
9	John R. Monaghan.....	61.30	118.23	175.74	242.41	597.68
10	Henry V. Butler, jr.....	59.72	116.63	172.14	242.08	589.57
11	James E. Walker.....	59.57	118.72	170.19	246.49	594.97
12	William R. Cushman.....	54.13	110.08	161.43	236.69	562.33
13	David W. Todd.....	60.70	117.21	169.79	217.08	564.78
14	James J. Raby.....	54.42	119.47	172.89	217.09	563.87
*15	Samuel C. Vestal.....	63.15	114.47	178.76	239.31	595.69
16	William H. Standley.....	54.55	114.67	175.21	234.65	579.08
17	Walter R. Gherardi.....	64.17	117.54	172.63	235.97	590.31
18	John V. Klemann.....	55.85	115.43	169.24	217.29	557.81
19	Kenneth M. Bennett.....	60.02	113.11	172.26	238.86	584.25
20	Michael J. McCormack.....	63.78	112.05	161.79	239.05	576.67
21	Worth Bagley.....	63.72	121.77	162.20	216.21	563.90
22	Albion J. Wadhams.....	54.73	111.75	174.29	234.46	575.23
23	Cassius R. Barnes.....	59.07	112.49	169.73	232.55	573.84
24	Edward H. Watson.....	64.74	112.49	164.16	219.89	561.28
25	Joseph C. Breckinridge.....	64.78	117.56	162.06	216.21	560.61
26	Orlo S. Knepper.....	54.32	111.91	165.64	239.84	571.71
27	Newt H. Hall.....	57.61	109.29	167.64	234.87	569.41
28	Rufus Z. Johnston, jr.....	53.19	107.08	164.22	232.79	557.28
*29	Joseph D. Sayers, jr.....	61.05	109.73	169.22	217.74	557.74

Merit roll for the four years ending June, 1895, of the Naval Cadets of the Class appointed in 1891, now performing required service afloat—Engineer Division—12 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggre- gate for four years.
	Maxima	76	152	228	304	760
1	Thomas M. Dick.....	63.50	128.26	185.88	262.09	639.73
2	Charles K. Mallory	55.21	118.78	184.15	269.71	627.85
3	Newton Mansfield.....	59.42	123.75	179.84	248.10	611.17
4	Daniel M. Garrison.....	53.93	113.89	177.48	249.56	594.86
5	Franklin D. Karns	56.23	116.85	176.57	243.20	592.85
6	James P. Morton	62.03	121.95	165.61	233.35	582.94
7	Frederick K. Freeman.....	53.73	107.77	166.14	243.23	570.87
8	Charles H. Walker	54.47	109.85	167.06	236.00	567.98
9	John F. Marshall, jr.....	58.92	112.48	156.96	222.71	551.07
10	Darwin B. Merritt.....	52.07	105.77	157.55	224.32	539.71
11	Edward H. Dunn.....	56.90	108.35	157.89	214.84	537.98
12	Ernest F. Eckhardt	53.55	104.24	161.11	209.95	528.85

MERIT ROLL—FIRST CLASS.

Merit roll of the Naval Cadets of the First Class—Line Division—39 members—Annual Examination, June, 1895.

NAME.	Index of annual merit										Aggregate.	
	33	3	60	48	8	20	20	16	5	33		
Maximo	33	3	60	48	8	20	20	16	5	33	304	
1 Stuart P. Smith	44.07	7.06	53.25	40.92	7.32	17.95	17.65	14.36	6.64	28.40	30.64	268.26
2 Frank P. Baldwin	42.64	6.16	52.65	39.00	7.50	14.65	16.90	13.52	6.00	28.08	28.96	256.96
3 William C. Davidson	44.85	6.28	51.15	36.36	7.60	14.30	16.40	14.00	6.90	27.36	30.32	255.62
4 Frank H. Brumby	41.73	6.04	51.90	41.88	7.66	15.05	15.25	14.00	6.44	25.04	30.24	255.33
5 William G. Grosvenor	42.36	6.28	51.15	40.08	7.36	15.45	16.75	13.32	5.70	26.48	27.52	252.47
6 Harrie Laning	42.64	6.82	48.75	37.44	7.18	13.90	15.95	13.68	6.62	26.96	30.96	250.96
7 John R. Monaghan	36.74	5.84	47.85	36.48	7.22	15.20	15.50	14.12	6.10	25.84	29.52	242.41
8 Henry V. Butler, jr.	41.08	6.70	48.30	34.32	7.00	14.85	16.35	10.64	6.30	27.44	29.60	242.08
9 James E. Walker	40.82	6.40	48.00	37.32	7.12	14.45	16.15	12.24	5.96	26.40	28.60	240.48
10 William R. Cushman	40.04	6.56	46.50	36.48	6.96	15.60	14.40	12.04	6.06	26.40	26.72	238.40
11 John V. Kierman	40.30	5.60	46.95	36.00	6.96	14.55	14.95	13.28	6.58	22.96	29.44	237.59
12 David W. Tould	41.34	6.36	45.90	35.04	7.12	12.50	14.10	12.80	6.72	26.64	28.56	237.08
13 Arthur T. Chester	40.95	6.42	46.80	33.96	7.00	14.00	14.50	11.48	6.02	26.96	28.90	237.05
14 William H. Stanley	36.74	6.48	45.30	32.76	6.96	12.40	14.65	12.96	6.70	27.36	29.52	234.85
15 James J. Raby	37.31	6.44	45.60	35.52	7.06	13.80	14.75	11.84	6.10	26.24	30.72	233.60
16 Rufus Z. Johnston, jr.	36.87	6.24	47.85	35.16	6.82	12.80	14.55	11.64	6.24	26.24	28.64	232.79
17 Cassius R. Barnes	36.09	6.04	46.65	35.52	6.66	14.60	15.15	12.44	5.64	25.36	28.40	232.55
18 Philip M. Benson	36.65	6.80	42.45	32.64	6.78	12.50	14.90	11.64	5.96	28.00	29.36	230.26
19 Michael J. McCurnuck	37.31	6.08	47.65	30.84	6.94	12.55	13.30	13.76	6.92	26.96	31.44	228.63
20 Samuel C. Vestal	36.87	6.60	44.25	33.12	6.44	14.00	14.25	13.84	5.44	26.60	27.64	228.31
21 Kenneth M. Bennett	37.05	6.40	44.40	32.76	6.79	13.06	14.10	17.36	6.66	26.84	27.76	228.66
22 Wm. S. Kappeler	37.79	5.16	45.15	32.96	6.60	13.10	14.45	11.44	6.34	24.96	27.66	228.64

23	Walter R. Gherardi	38.74	6.22	43.20	32.64	6.82	11.55	13.30	12.12	6.26	26.56	28.56	225.97
24	Albion J. Wadhams	37.96	6.08	44.55	32.88	7.04	13.25	14.50	10.76	6.50	26.48	24.88	224.88
25	Newt H. Hall	34.97	6.02	41.85	32.28	7.04	13.85	14.10	12.52	5.84	26.24	30.16	224.87
26	Edward H. Watson	36.92	6.10	43.05	31.80	6.42	12.65	12.90	13.20	5.96	25.92	24.88	219.80
27	Joseph D. Sayers, jr.	36.14	5.30	43.50	32.16	6.66	12.75	13.65	13.88	6.66	25.12	21.92	217.74
28	Worth Bagley	35.36	6.14	40.05	32.28	7.34	12.50	13.20	11.88	6.60	26.72	24.24	216.31
29	Joseph C. Breckinridge	34.32	6.06	39.90	30.96	7.44	13.25	13.10	14.76	6.10	25.84	24.48	216.21

Merit roll of the Naval Cadets of the First Class—Engineer Division—12 members—Annual Examination, June, 1895.

Order of annual merit.	NAME.	Naval construction.	Designing machin- ery.	Marine engines.	Boilers.	Summer practical work in steam en- gineering	Least squares and applied mechanics.	Physics.	Physiology and hy- giene.	Mathematics.	Conduct	Aggregate
		Maxima.....	32	48	40	32	20	40	20	8	22	22	204
1	Charles E. Mallory	27.84	42.48	35.50	28.72	18.00	24.40	17.25	6.10	22.64	22.00	202.7
2	Thomas H. Dick	26.32	42.48	32.70	28.16	18.50	22.50	15.25	6.54	22.64	22.00	202.00
3	Daniel M. Garrison....	25.28	38.48	32.00	27.00	18.00	20.00	15.00	6.24	22.16	25.00	200.16
4	Newton Mansfield.....	25.84	38.64	29.90	27.00	19.50	22.40	15.10	6.74	22.26	22.26	200.4
5	Frederick N. Freeman.	22.72	37.68	21.70	26.88	18.75	22.70	14.20	6.06	27.00	22.24	201.2
6	Franklin D. Karns....	23.28	35.28	30.00	25.00	19.00	22.90	14.70	7.44	22.48	25.22	201.20
7	Charles H. Walker	22.20	37.20	28.00	24.96	19.50	22.50	12.70	6.26	22.26	22.00	200.00
8	James P. Morton	22.52	34.08	20.90	24.08	18.75	20.70	14.00	5.56	22.26	22.00	201.2
9	Darwin R. Merritt	21.60	34.32	27.20	22.92	18.26	27.50	12.00	6.16	22.26	22.26	201.2
10	John F. Marshall, jr...	22.48	23.00	28.30	25.12	18.25	26.80	12.20	5.70	22.26	25.22	201.2
11	Edward H. Dunn.....	21.76	21.92	27.80	22.08	18.25	22.20	12.25	6.22	24.00	22.26	204.00
12	Ernest F. Eckhardt ..	22.40	20.12	25.70	21.04	18.25	22.20	12.20	6.04	22.22	22.00	200.00

Merit roll of the Naval Cadets of the Second Class—42 members—Annual Examination, June, 1895.

Order of annual merit.	NAME.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and me- chanics.	Physics and chem- istry.	French.	Mechanical draw- ing.	Efficiency.	Conduct.	Aggregate.
		12	12	32	12	48	40	12	12	24	24	228
* 1	Richard H. Robinson...	9.72	10.77	28.48	10.20	44.28	36.50	10.32	10.32	20.34	22.20	203.18
2	Jonas H. Holden.....	10.65	10.02	27.44	10.80	36.12	31.00	9.27	11.19	21.12	23.22	190.83
e 3	Charles L. Leiper.....	9.87	9.87	26.40	9.90	30.00	34.10	10.44	10.47	19.62	20.82	190.49
4	Thomas T. Craven.....	10.65	9.72	24.96	10.44	40.20	30.10	9.39	10.38	20.34	21.12	187.30
5	Ralph E. Walker.....	9.57	10.53	25.36	9.45	41.28	31.70	10.32	9.90	19.38	19.44	186.93
6	Charles L. Poor.....	9.75	10.23	25.84	9.45	37.44	30.70	11.01	9.24	19.74	21.42	184.82
e 7	Gatewood S. Lincoln...	9.81	9.90	24.88	9.90	38.52	32.70	9.60	8.13	19.68	20.76	183.88
8	Andrew E. Kalbach....	8.61	9.99	23.04	10.05	39.12	31.90	9.51	9.18	19.98	21.84	183.22
9	Ralph Earle.....	9.63	9.87	25.84	9.24	35.40	30.50	9.42	10.38	19.26	21.78	181.32
10	Daniel W. Wurtsbaugh	9.54	9.75	21.84	10.50	38.04	30.40	8.88	9.00	19.74	22.44	180.13
11	Charles M. Tozer.....	9.48	10.17	23.84	9.75	36.60	29.90	8.83	9.09	19.62	21.06	178.39
e 12	Henry O. Bisset.....	8.40	9.93	21.68	9.30	36.96	31.60	9.93	8.37	19.14	21.78	177.09
13	Duncan M. Wood.....	9.75	9.45	24.56	9.09	34.68	30.10	8.55	10.53	19.02	21.12	176.85
e 14	Edward T. Fitzgerald..	9.66	9.63	24.96	10.05	33.48	29.20	8.64	9.72	19.50	21.42	176.26
15	Ivan C. Wettengel.....	9.81	9.99	23.92	9.75	34.44	30.20	9.87	8.85	19.08	20.24	176.25
16	Henry S. Kimball.....	9.42	9.33	22.48	10.50	31.56	29.20	9.54	9.63	20.94	20.94	173.54
17	Thomas A. Kearney...	9.18	9.33	22.88	10.35	30.84	29.20	9.03	9.27	20.16	22.38	172.62
18	Wat T. Cluverius, jr...	8.67	9.60	22.96	9.39	32.28	30.50	9.42	8.04	19.02	20.40	170.28
19	Mark St. C. Ellis.....	8.58	9.24	22.64	9.99	32.76	28.50	9.33	9.21	18.72	20.82	169.79
e 20	Albert W. Marshall...	8.52	9.33	22.48	9.45	32.40	29.50	8.19	8.85	19.56	21.48	169.76
P 21	George I. Middleton...	8.40	9.27	22.40	10.14	30.96	28.30	10.08	9.18	18.78	21.12	168.63
22	Leigh C. Palmer.....	9.00	8.82	23.28	10.05	32.16	27.60	9.51	9.30	19.86	18.96	168.54
23	Frank E. Ridgely.....	8.46	9.24	22.80	9.90	32.16	29.00	9.72	8.70	19.32	18.66	167.96
24	Arthur MacArthur, jr.	8.37	9.39	21.36	9.75	32.76	29.20	8.04	9.42	19.08	19.86	167.83
25	Dudley W. Knox.....	8.64	8.88	20.80	9.54	31.08	28.50	8.49	10.44	19.20	21.90	167.47
e 26	Charles P. Burt.....	9.33	9.21	21.92	9.99	30.48	28.40	8.97	9.03	19.14	20.46	166.93
27	Earl P. Jessop.....	9.21	9.03	21.12	9.84	30.96	27.70	8.70	8.43	19.20	21.60	165.79
28	Charles E. Gilpin.....	8.61	7.83	20.80	9.84	30.96	25.20	11.28	10.05	19.86	21.30	165.73
e 29	Kenneth G. Castleman.	8.28	8.88	20.24	9.90	30.24	30.60	9.30	9.24	20.10	16.50	163.28
30	Edward McCauley, jr..	8.43	8.88	20.96	9.21	30.60	26.80	8.94	8.79	19.80	20.76	163.17
e 31	William L. Littlefield..	8.25	8.13	20.80	10.65	31.20	27.70	8.67	10.14	19.62	16.74	161.90
32	Henry C. Mustin.....	8.97	8.76	21.52	9.09	30.24	27.50	8.58	11.31	18.96	16.26	161.19
e 33	Pope Washington.....	7.98	8.43	20.32	9.24	30.72	25.30	8.25	8.79	18.96	20.22	158.21
34	Rowland I. Curtin.....	8.37	8.37	21.28	9.00	31.80	27.00	7.89	8.73	18.24	17.34	158.02
e 35	Arthur Crenshaw	7.89	7.71	20.24	9.45	30.24	25.10	8.04	7.95	19.62	21.42	157.66
e 36	James B. Henry, jr....	8.22	8.46	20.32	9.39	30.00	26.90	8.07	8.40	18.66	17.82	156.24
P a	Junius H. Jones.....	(a)	(a)	(a)	9.60	(a)	(a)	(a)	9.24	19.26	22.80	.....
†	John H. Roys.....	8.04	8.52	20.48	9.39	29.40	25.50	8.97	8.49	19.44	18.30	156.53
§	George J. Hauenstein..	8.22	8.07	20.08	9.30	29.16	24.70	8.55	8.64	18.60	21.18	156.50
§	Henry M. Doak, jr.....	7.27	8.52	19.36	9.24	29.16	25.40	8.07	7.74	18.78	19.38	153.42
e †	George B. Rice.....	7.83	8.04	20.40	9.54	30.48	24.70	8.40	7.89	18.90	17.16	153.34
†	Amon Bronson, jr.....	8.04	8.07	19.76	8.19	32.64	26.50	8.40	8.04	17.70	14.82	152.16

Merit roll of the Naval Cadets of the Third Class—60 members—Annual Examination June, 1895.

Order of annual merit.	NAME.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
		40	20	16	20	24	16	16	142
*1	William G. Du Bose.....	36.40	18.10	14.96	19.30	20.46	12.96	15.92	117.9
*2	Ernest F. Eggert.....	34.00	18.00	13.44	17.05	23.34	12.48	14.16	112.4
*3	Harry E. Yarnell.....	32.20	16.65	14.36	17.35	22.20	13.08	15.44	110.9
*4	Fletcher L. Sheffield.....	34.10	17.10	13.80	17.50	20.22	13.36	15.12	111.0
*5	Joseph W. Powell.....	33.10	16.40	13.48	16.30	21.84	12.56	15.68	110.7
6	Needham L. Jones.....	30.40	16.50	14.40	18.00	19.92	12.76	15.00	107.0
7	Harlan P. Perrill.....	33.90	17.20	13.64	16.05	17.68	13.12	15.20	109.7
8	David E. Tholeen.....	31.60	16.50	13.60	14.45	22.61	12.84	14.84	109.9
9	Gilbert Chase.....	30.50	16.80	12.56	16.75	22.68	12.52	13.40	106.6
10	Alfred W. Pressey.....	31.10	17.55	12.72	17.40	20.40	12.72	13.00	107.4
11	Luther M. Overstreet.....	31.70	16.35	12.12	13.00	23.46	13.00	15.20	109.7
12	Victor S. Houston.....	27.90	14.00	12.32	19.70	23.04	12.92	13.00	102.8
13	Cyrus R. Miller.....	29.40	18.35	13.16	17.20	19.14	12.52	12.56	102.6
14	Arthur J. Hepburn.....	30.70	17.20	13.80	17.30	18.08	12.16	11.64	103.2
15	William H. Reynolds.....	28.90	15.05	12.64	16.05	21.48	12.48	14.40	101.0
16	Joseph W. Gracina.....	27.10	16.30	14.08	16.55	19.80	12.64	14.20	100.0
17	Orin G. Murfin.....	30.50	14.95	12.76	13.90	19.88	12.48	13.20	101.1
18	William R. White.....	28.20	16.15	13.04	16.55	22.26	12.16	11.00	101.1
19	David P. Boyd, jr.....	30.80	15.75	12.68	15.80	20.70	12.92	10.64	101.5
20	Louis C. Richardson.....	31.00	14.95	12.48	13.40	19.08	12.00	15.00	100.0
21	Frederic R. Holman.....	30.70	14.95	12.72	15.65	18.24	12.48	11.92	100.0
22	Leonard R. Sargent.....	29.30	15.65	14.00	17.00	16.44	12.20	13.08	99.7
23	Clifton C. Roehle.....	27.30	15.70	11.80	12.00	21.16	12.08	14.92	99.0
24	Daniel S. Mahony.....	31.00	16.00	14.24	16.55	15.76	12.16	11.60	101.1
25	Edward T. Hoopes.....	32.50	15.30	10.92	14.45	20.84	12.12	10.20	101.0
26	Thomas C. Hart.....	27.80	15.65	12.28	12.90	19.62	12.80	12.00	99.1
27	Henry R. Herndon.....	29.00	14.60	12.96	16.15	16.32	12.64	13.00	99.5
28	Henry L. Collins.....	31.70	16.40	11.24	14.10	17.16	12.56	12.00	101.3
29	Walton R. Sexton.....	26.70	15.75	11.96	13.95	19.32	11.00	13.00	98.0
30	Albert H. McCarthy.....	28.70	14.55	12.68	12.40	16.88	12.92	13.32	98.0
31	Austin Kautz.....	27.90	14.30	12.24	15.90	16.44	12.64	14.00	98.2
32	Hilary Williams.....	27.40	14.45	12.20	15.30	18.24	12.72	13.64	98.0
33	Henry N. Jensen.....	27.70	13.40	11.76	12.65	19.62	12.48	13.00	97.0
34	Sheldon W. Anding.....	25.80	14.40	11.72	13.40	19.40	12.48	13.20	96.0
34	Arthur St. C. Smith, jr.....	27.80	14.95	12.08	13.35	16.50	12.72	14.00	98.0
36	William C. Ascareum.....	26.00	15.25	10.72	12.55	21.34	12.40	13.64	95.2
37	Robert C. Haghy.....	26.00	14.40	12.24	16.00	15.42	12.44	14.00	95.1
38	George Webber.....	26.20	14.55	11.96	14.05	18.44	12.56	14.12	95.2
39	Willis McIlwain.....	27.80	15.00	12.20	13.00	15.84	12.72	13.92	96.0
40	Robert W. Henderson.....	27.60	15.20	11.80	14.05	17.02	12.36	12.00	96.1
41	Andrew T. Graham.....	26.00	15.20	11.72	13.15	14.08	12.24	14.72	95.0
42	Alfred C. Owen.....	27.60	14.25	12.12	15.35	17.40	12.64	12.00	96.0
43	Joseph D. Terry.....	26.40	15.65	10.64	14.35	16.56	12.32	14.16	95.9
44	William P. Gilce.....	25.30	12.30	11.12	12.75	19.02	12.96	15.36	93.0

Merit roll of the Naval Cadets of the Third Class—60 members—Annual Examination, June, 1895—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical and descriptive geom- etry.	Physics and chemistry.	English and law.	French, Spanish, and Ger- man.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
	Maxima	40	20	16	20	24	16	16	152
45	Clarence S. Kempff	25.30	13.55	11.36	13.30	19.08	13.04	14.32	109.95
46	Walter M. Falconer	28.40	14.15	10.96	13.35	20.22	12.56	10.16	109.80
47	Irwin F. Landis	28.70	15.00	12.60	13.50	15.36	11.72	12.88	109.76
48	John W. Morse.....	25.20	12.80	11.72	15.65	16.80	12.92	14.60	109.69
49	Arthur L. Wessels.....	26.80	14.55	10.92	13.15	19.56	12.76	10.92	108.66
50	Oscar D. Duncan	26.50	13.95	10.40	13.10	20.40	11.60	12.56	108.51
51	Charles T. Owens.....	28.20	14.35	11.64	13.40	15.72	11.48	12.44	107.23
52	William D. Leahy.....	27.00	14.65	11.80	13.95	16.20	11.72	11.80	107.12
53	Peter L. Pratt	25.80	13.75	10.80	14.45	17.94	12.28	11.80	106.82
54	Ernest C. Keenan.....	26.90	13.40	12.20	13.60	15.30	11.64	12.68	105.72
55	Samuel W. Bryant.....	25.70	13.65	10.56	14.35	16.02	12.12	12.88	105.28
56	John F. Hilleary	25.80	12.75	10.40	13.25	17.22	12.16	13.64	105.22
57	Samuel G. Magill, jr	26.90	14.05	10.64	12.85	17.16	11.68	10.72	104.00
58	Charles J. Naylor.....	25.60	13.55	10.16	13.60	15.72	11.80	12.72	103.15
w	John A. Day	27.10	13.35	10.72	17.70	15.72	12.92	9.64	107.15
w	George Van Orden.....	26.70	14.00	11.00	13.30	16.74	12.08	9.68	103.50

*Merit roll of the Naval Cadets of the Fourth Class—60 members—Annual Examination
June, 1895.*

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.	Aggregate.
		Maxima.....	20	20	20	20	
• 1	Henry T. Wright.....	16.90	18.55	19.20	6.28	7.90	86.73
• 2	John Halligan, jr.....	17.15	18.25	18.20	6.18	7.75	85.53
• 3	James A. Hand, jr.....	16.85	17.95	18.95	6.14	7.95	85.84
• 4	William C. Watts.....	16.70	18.00	17.25	6.10	7.80	85.85
5	Louis Shane.....	15.00	15.95	19.20	6.08	7.95	85.18
6	Edward Woods.....	16.70	16.85	16.70	6.54	7.00	82.79
7	Henry Williams.....	18.25	16.50	15.40	6.72	7.55	84.47
8	William T. Tarrant.....	15.35	17.15	17.40	5.99	7.40	83.69
9	Wilbur G. Briggs.....	16.10	16.70	16.15	6.14	7.95	84.09
10	George T. Pettengill.....	15.65	17.50	16.00	6.14	6.60	82.49
11	Edward W. McIntyre.....	16.20	17.10	15.45	5.96	7.80	82.51
12	George L. Smith.....	16.75	15.40	16.30	6.22	7.65	82.97
13	Charles Boone.....	16.35	15.70	16.10	6.70	7.05	81.95
14	Carl C. Rutledge.....	12.20	16.65	17.95	6.78	7.25	80.83
15	Frank L. Pinney.....	16.55	15.15	15.00	6.22	7.25	81.17
16	James M. Love, jr.....	15.80	15.45	15.40	6.22	7.00	81.87
17	Yancey S. Williams.....	16.30	14.35	16.15	6.14	7.00	80.94
18	Hugh K. Taylor.....	14.00	15.65	16.15	6.28	7.75	80.63
19	Josephus J. Brown.....	14.80	16.35	16.00	6.16	7.00	80.31
20	Henry C. Dinger.....	15.00	16.15	15.30	5.80	7.45	80.75
21	Morris H. Brown.....	14.80	15.55	16.35	6.10	7.05	80.85
22	Herman J. Elson.....	14.35	15.25	16.25	6.08	7.45	80.33
23	Ralph N. Marble, jr.....	16.00	14.95	14.15	6.38	7.75	79.23
24	Clarence A. Abel.....	14.85	16.00	15.65	6.00	7.15	79.65
25	Alexander N. Mitchell.....	14.30	15.80	15.05	6.04	7.05	79.29
26	Lyman A. Cotton.....	15.95	15.00	12.95	6.20	7.70	78.80
27	William B. Wells.....	15.10	15.00	14.90	6.06	7.50	78.56
28	Ulysses S. Macy.....	14.75	15.20	14.90	6.04	7.00	78.89
29	Walter B. Tardy.....	14.70	16.40	13.85	6.10	7.25	78.30
30	Frank T. Evans.....	14.15	14.15	16.90	6.16	6.70	78.16
31	Zeno K. Briggs.....	14.00	15.25	14.15	6.20	7.70	77.30
32	Daniel P. Mannia.....	12.65	15.15	15.00	6.28	7.70	77.78
33	Thomas L. Johnson.....	12.90	15.25	14.90	6.20	7.40	76.65
34	James C. Kruse.....	14.35	14.25	15.00	6.16	6.90	76.66
35	Thomas B. Farrin, jr.....	12.95	15.40	15.15	6.04	7.25	76.79
36	Charles P. Nelson.....	12.95	17.20	15.70	6.44	7.20	76.49
37	Henry A. Purser.....	12.75	14.20	15.65	5.92	7.75	76.27
38	William W. Arnold.....	12.85	14.15	14.35	6.52	7.20	75.07
39	William H. England.....	12.50	15.50	14.00	5.06	7.10	74.16
40	Guy W. Fuller.....	14.45	15.70	12.55	6.02	7.20	75.92
41	Roscoe L. Peterson.....	12.40	12.95	15.00	6.20	6.90	74.45
42	Walter G. Roper.....	15.00	12.80	12.40	6.20	6.20	72.60
43	William P. Cronan.....	12.95	12.65	14.55	6.08	7.50	73.73
44	Edward T. Conover.....	12.40	12.95	12.00	6.10	7.02	70.92

Merit roll of the Naval Cadets of the Fourth Class—60 members—Annual Examination,
June, 1895—Continued.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.	Aggregate.
	Maxima	20	20	20	8	8	76
45	George Brown, jr.....	12.75	13.00	14.00	6.62	7.88	54.25
46	Zachariah H. Madison.....	13.75	13.00	13.80	6.02	6.98	54.15
47	John A. Schofield.....	13.85	13.45	13.00	6.12	7.36	53.78
48	James B. Gilmer.....	12.60	14.15	13.30	6.14	7.56	53.75
49	George C. Thorpe.....	13.00	13.50	13.85	6.10	6.98	53.43
50	Benjamin L. Brockway.....	12.80	13.15	13.70	6.12	7.46	53.23
50	Charles M. Hunter.....	13.70	13.50	13.95	5.64	6.44	53.23
52	Scott C. Applewhite.....	12.65	13.80	12.75	5.98	7.38	52.56
53	John F. Babcock.....	12.75	13.55	13.25	6.04	6.80	52.39
51	George C. Sweet.....	12.75	12.00	13.60	6.06	6.60	51.91
†	Henry A. Lehfeldt.....	12.05	14.95	14.95	6.14	6.74	54.83
§	Augustus W. Shockley.....	11.55	14.75	14.80	6.26	7.26	54.62
†	John S. Graham....	12.25	14.05	12.75	6.18	7.18	52.41
†	Arthur F. Huntington.....	12.05	13.25	13.10	5.88	6.56	50.84
†	David C. Hanrahan.....	12.15	13.00	12.75	6.18	6.66	50.74
†	Oliver S. Hord.....	12.60	13.35	12.20	5.98	6.06	50.19

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.) *Provided, however,* That there shall not be at any time more in said Academy appointed at large than ten.—(*Act of Congress approved August 5, 1882.*)

III. The course of naval cadets is six years.—(*Rev. Stat.*, § 1520.) Four years at the Naval Academy and two years at sea, at the expiration of which time the cadet returns to the Academy for final graduation, and the district then becomes vacant.

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the naval cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. *At least* fifteen appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for naval cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but if it is not made by that time the Secretary of the Navy shall fill the vacancy by appointment of an actual resident of the district in which the vacancy exists, who shall have been for at least two years immediately preceding the date of his appointment an actual and bona fide resident of the district in which the vacancy exists and of the legal qualification under the law as now provided. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. *And all candidates must, at the time of their examination for admission, be between the ages of * fifteen and twenty years and physically sound, well-formed, and of robust constitution.*"—(*Rev. Stat.*, § 1517.)

* Act 2d March, 1889.

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examination.

No leave of absence will be granted to Cadets of the fourth class.

EXAMINATION.

VIII. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat.*, § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy at the Naval Academy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz:

- Feeble constitution, inherited or acquired;
- Retarded development;
- Impaired general health;
- Decided cachexia, diathesis, or predisposition;
- Any disease, deformity, or result of injury that would impair efficiency, so as to render the candidate unfit for service;
- Weak or disordered intellect;
- Cutaneous or communicable disease;
- Unnatural curvature of spine, torticollis, or other deformity;
- Inefficiency of either of the extremities or large articulations from any cause;
- Epilepsy or other convulsions within five years;
- Impaired vision, disease of the organs of vision, imperfect color sense; acuteness must not fall below fifteen-twentieths of the normal in either eye;
- Impaired hearing or disease of the ear;
- Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
- Impediment of speech to such an extent as to impair efficiency in the performance of duty;
- Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
- Hernia, complete or incomplete, or undescended testis;
- Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
- Disease of the genito-urinary organs;
- Chronic ulcers, ingrowing nails, large bunions, or other deformity of feet;
- Loss of many teeth, or teeth generally unsound.

Attention will also be paid to the stature of the candidate, and no one under size for his age will be received at the Academy. In the case of doubt as to the physical condition of the candidate, any marked deviation from the normal standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, whether abstract or concrete, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the test of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed, *e. g.*:

“They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what the

ought." Such a sentence must be parsed *fully*, giving the part of speech, and the case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus—

Strange is a descriptive adjective, positive degree. It qualifies the noun *Sam*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative present tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected; thus—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have seen him have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep us safe for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the location of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they flow; the position of important seas, gulfs, and arms of the sea; the position of independent States, their boundaries and capital cities; the position and direction of great peninsulas, and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and of colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well-known ports.

The candidate's knowledge of the geography of the United States can not be so full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other States, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the United States as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the general character as the following will be given:

1. Name the earliest European settlements within the present limits of the United States, and give their positions. When and by whom were these settlements made?
2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What colonies of Pennsylvania include? When was it divided?
3. State the leading events of the colonial wars, and give the results of each.
4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the United States, giving the names of the commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.
Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz:

One dress jacket.....	\$19. 50	One jackknife.....	\$0. 75
One blouse	11. 75	Six sheets.....	3. 45
Two pairs trousers.....	21. 00	Hammock clews.....	. 58
Two working suits.....	1. 90	One pair of bathing trunks.....	. 20
One overcoat.....	22. 50	Three pairs white thread gloves.....	. 54
One rubber coat.....	4. 00	Two black silk neckties .....	. 40
One rubber hat .....	. 60	Two clothes bags.....	. 46
Two pairs of regulation leggins..	1. 50	One hammock mattress.....	3. 00
One parade cap.....	2. 95	a One requisition book.....	. 40
One knit cap .....	. 66	a One pass book.....	. 40
One mug .....	. 10	a Stencil, ink, and brush.....	. 45
One soap box.....	. 65	a One bottle of indelible ink.....	. 18
One laundry book .....	. 34	a One wash basin and pitcher....	. 88
One pair of blankets	2. 50	a One pair of gymnasium slippers.	1. 05
Two pairs of high shoes.....	7. 20	* One whisk .....	. 15
One pair of overshoes.....	. 72	* One coarse comb .....	. 10
Eight white shirts.....	4. 40	* One cake of soap.....	. 10
Twelve linen collars.....	1. 50	* One hairbrush.....	. 55
Eight pairs of cuffs.....	2. 00	* Stationery .....	. 50
* Eight pairs of socks.....	1. 84	* Twelve white handkerchiefs....	2. 40
* Eight towels.....	1. 84	* One pair of suspenders .....	. 40
* Shaving outfit	1. 61	* Four suits pajamas.....	6. 00
* Four pairs of drawers (winter)..	5. 00	* One toothbrush .....	. 20
b Four pairs of drawers (summer)..	1. 60	* Thread and needles.....	. 19
* Four undershirts (winter).....	5. 00	* Blacking brush and blacking...	. 66
b Four undershirts (summer).....	1. 60	* Nailbrush.....	. 30
One hand glass.....	. 36		
			<hr/>
			24. 29
	<hr/>		
	124. 62		

When moving into cadet quarters, cadets will supply themselves with the following articles, viz:

a Two bedspreads.....	\$2. 20	One mirror	\$1. 10
a Two pairs of drill gloves.....	1. 00	a One rug.....	1. 00
a One slop jar .....	. 88	a One hair mattress.....	5. 25
a Two spatter cloths.....	. 66	a One broom.....	. 29
One hair pillow.....	. 75	Six pillowcases.....	1. 38
	<hr/>		<hr/>
	5. 49		9. 02

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship, viz:

Three working suits.....	\$2.85	One pair high shoes.....	\$
Four woolen shirts.....	7.40	One knit cap.....	..
Three white sailor hats.....	1.20		
	<hr/>		
	11.45		

Articles marked *a* will not be taken on board the practice ship.
Of the articles marked *b*, cadets entering in September must have four each.
The articles marked *c*, not being required to conform to a standard pattern, *a.* be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.
Each naval cadet must, on admission, deposit with the pay officer the sum of \$20 for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.
All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc.....	\$17.45
Deposit for books, etc.....	2.50
	<hr/>
Total amount required.....	19.95

The value of clothing brought from home is to be deducted from this amount.
Each naval cadet one month after admission will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution; arithmetical, geometrical, and harmonical progression.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra. Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Wentworth's Geometry.
<i>English.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greeco and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Languages.</i>	5	4	FRENCH: "Natural Method."	Chardenal's Complete French Course. Marion's Le Verbe en quatre Tableaux Synoptiques. Termes Nautiques, Pornain. Bellow's Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; theory of probability; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations; determinants.	Hall and Knight's Higher Algebra Howditch's <i>Calculus</i> blos.
	3	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Wentworth's <i>Geometry</i>
<i>English.</i>	2	4	ENGLISH: Words, sentences, and paragraphs; exercises in the composition of letters and telegrams. Themes.	A. S. Hill's <i>Formulas</i> of Rhetoric Boehler's <i>Practical</i> ercises in English Webster's <i>Dictionary</i> Eliot's <i>History of the</i> United States Mitchell's <i>Atlas</i>
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States, by notes or lectures.	
<i>Languages.</i>	5½	4	FRENCH: "Natural Method."	Berry's <i>La Langue Française</i> , 1 ^{re} partie Berry's <i>French Reader</i> Woman's <i>First Spanish</i> Book. Knapp's <i>Spanish Grammar</i> Seane's <i>Dictionary</i>
			SPANISH: "Natural Method." (Given as an advanced course.)	

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections, representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order; projections of the sphere.	Church's Descriptive Geometry. Hendrickson-Dresel's Stereographic Projection. Rittenhouse's Exercises in Descriptive Geometry Drawing.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry. Levett and Davison's Plane Trigonometry. Bowditch's Useful Tables.
<i>English.</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	A. S. Hill's Principles of Rhetoric. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Languages.</i>	3	4	FRENCH: "Natural Method." SPANISH: "Natural Method." (Given as an advanced course.)	Modern French Plays. Bercy's La Langue Française, 2 ^e partie. Guerres Maritimes Jurien de la Gravière. Knapp's Spanish Reader.
<i>Drawing.</i>	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Fannce's Mechanical Drawing. Rittenhouse's Exercises in Descriptive Geometry. Drawing.

COURSE OF INSTRUCTION.

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics.</i>	4	4	<p>PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniell's Principles of Physics.</p> <p>Practical Physics by Stewart and Gee</p> <p>Remson's General Chemistry</p> <p>Lecture Notes.</p>
<i>Mathematics.</i>	5	4	<p>Stereographic Projections and Solutions of the "Astronomical Triangle."</p> <p>ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of coordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree, equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.</p>	<p>Hendrickson's Descriptive Stereographic Projections.</p> <p>C. Smith's Conic Sections.</p>
<i>English</i>	2	4	<p>ENGLISH: Classification of words, definition of words by usage and by derivation, synonyms, laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition, exercises in the composition of official dispatches, letters, and telegrams. Themes.</p>	<p>Abbott and Phelps's English Lessons for English People.</p> <p>Abbott's How to Write Clearly.</p> <p>Boscher's Practical Exercises in English.</p> <p>Webster's Dictionary.</p>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Languages.</i>	2	4	FRENCH: Course of the first term continued. SPANISH: Course of the first term continued.	Same as for the first term.
<i>Drawing</i>	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Faunce's Mechanical Drawing. Rittenhouse's Exercises in Descriptive Geometry Drawing.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Seamanship.</i>	1	4	SEAMANSHIP: Use of the compass, lead, and log; signals; blocks and tackles; running rigging; description and use of sails and their fittings, purchasing weights; boats and their management; ground tackle; handling an anchor; handling sails; port drills and evolutions; management under sail; duties of naval cadets; rules of the road.	Luce's <i>Seamanship</i> ; Department <i>curriculum</i>
<i>Steam Engineering.</i>	3	4	PRINCIPLES OF MECHANISM. Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers; comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention; types of marine engines, including condensers and pumps, with explanation of the use of all the parts; screw propellers and paddle wheels; the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Goodeve's <i>Elements of Mechanism</i> Gow's <i>Notes and Problems in Elementary Mechanism</i>
<i>Mechanics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series, maxima and minima; geometrical applications, functions of two or more variables.	Rice and Johnson's <i>Differential Calculus</i>
	5	2	INTEGRAL CALCULUS: The methods of integration, definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves, centers of gravity; moments of inertia, planimeters; rules for the approximate determination of areas and volumes.	Johnson's <i>Integral Calculus</i>

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics.</i>	4	4	<p>PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography.</p> <p>CHEMISTRY: Short course in chemical analysis.</p>	<p>Daniell's Principles of Physics.</p> <p>Ganot's Physics.</p> <p>Stewart's Treatise on Heat.</p> <p>Practical Physics, by Stewart and Geo.</p> <p>Kohlrausch's Physical Measurements.</p> <p>Lecture Notes.</p> <p>Stoddard's Outline of Qualitative Analysis for Beginners.</p>
<i>English.</i>	1	4	HISTORY: The history of the United States Navy.	Maclay's History of the Navy.
<i>Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Jurien de la Gravière's Guerres Maritimes.
<i>Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; isometrical drawing.	<p>Tomkin's Machine Construction.*</p> <p>Faunce's Mechanical Drawing.</p>

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS -Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship.	1	4	Course of the first term continued.	Same as for the first term.
Navigation.	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac. Dead reckoning and "day's work."	White's Astronomy; Bowditch's Navigator; American Ephemeris and Nautical Almanac.
Steam Engineering.	3	4	MARINE ENGINES: Early history and progress of marine engineering; work and efficiency; nature and properties of heat; application of heat to water; combustion of coal and economy of fuel; arrangement and efficiency of boilers; fittings and mountings of boilers; corrosion and preservation of boilers; efficiency of the steam; methods of increasing the expansive efficiency of steam, compound engines; condensation of steam; regulating and expansion valves and gear; slide valves and fittings; starting and reversing gears; cylinders and their fittings; condensers and fittings; rotative motion; details of compound and triple expansion engines; propulsion, screw-propellers; the indicator and indicator diagrams, auxiliary machinery and fittings.	Seabutt's Marine Engines; Marine Engines and Boilers; Notes on Sketches. 1884.
Mechanics.	3	4	MECHANICS: Kinematics, dynamics, statics, hydromechanics, the motion of projectiles, friction and other resistances, the application of mechanical principles to simple machines and to instruments.	Zippel's Mechanics; Bowser's Hydraulics.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Physics.	4	4	<p>PHYSICS: Recitations in light and heat concluded.</p> <p>Electricity and magnetism commenced.</p> <p>Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.</p>	<p>Same as for the first term.</p> <p>Thompson's Electricity and Magnetism.</p> <p>Ayrton's Practical Electricity.</p> <p>Day's Exercises in Electrical Measurements.*</p> <p>Lecture Notes.</p>
English.	1	4	<p>HISTORY: The history of the United States Navy.</p>	<p>MacLay's History of the Navy.</p>
Languages.	1	4	<p>FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.</p>	<p>Same as for the first term and French newspapers.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship.	3	4	<p>SEAMANSHIP: Stowage and organization, boats and their management; ground tackle; handling anchors; handling sails; management under sail and under steam; turning and maneuvering; wharfing, docking, towing, anchoring, mooring, etc.; emergencies, port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; use of sounding machine.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in iron and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats, special constructions; launching; types of ships, structural strength and strains, buoyancy and stability in the intact and the damaged conditions, theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities, the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship; section and squadron; evolutions of the fleet, signaling by Army and Navy code, Navy and International codes of flag signals.</p>	<p>Lucr's Seaman's Handbook Department of the Navy Regulations</p> <p>Special Notes and Instructions. Navy Department Publications. White's Manual of Naval Architecture Welch's Textbook of Naval Architecture</p> <p>Navy and International Signal Books Fleet Drill Book, Navy Department.</p>
Ordnance.	3	4	<p>GUNNERY: Accuracy and rapidity of fire, the probability of hitting objects of various forms, the mean and probable errors of guns; derivation of rules for correcting certain errors that arise in practice at sea</p>	<p>Accuracy and Probability of Fire, Naval Academy publication (time)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Ordnance—Cont'd.</i>	3	4	<p>INSTRUCTIONS FOR INFANTRY AND ARTILLERY: Schools of the squad, company, battalion, and brigade, in close and extended orders; street riot drill; ceremonies.</p> <p>GUNNERY DRILL: Distribution of the crew to the guns and other stations; duties of officers and men; drill of guns of the main and secondary batteries.</p> <p>GUNS AND GUN MOUNTS: Metals used in their construction; description and manufacture of service guns and their mounts for main and secondary batteries; nomenclature, care, and preservation of the ordnance outfit.</p>	<p>Instructions for Infantry and Artillery, U. S. Navy.</p> <p>Gunnery Drill Book for the New Armaments.</p> <p>Text-book of Ordnance and Gunnery.</p> <p>Descriptions of Modern Ordnance and Modern Gun Mounts.</p>
<i>Navigation.</i>	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations, current observations; sailing directions, the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Chauvenet's Spherical and Practical Astronomy.*</p> <p>Walker's Navigation.</p> <p>Bowditch's Navigator.</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Phelps's Practical Marine Surveying.</p> <p>Projection Tables.</p> <p>Craig's Azimuth.*</p>
<i>Mechanics.</i>	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Strength of materials; elasticity; stress and strain; theory of structures; strength and deflection of beams, beams of uniform resistance.	<p>Cotterill and Slade's Lesson in Applied Mechanics.</p> <p>Cotterill's Applied Mechanics.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Physics.	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric light wires; experiments upon induction; practice in photography and micro-photography.	Same as for the — class year Thompson's — Electric Machinery— Lecture Notes

SECOND TERM.

Seamanship.	4	4	Course of the first term continued.	Same as for the — term.
Ordnance.	5	4	BALLISTICS: The laws of combustion of gunpowder; velocities and pressures in guns; rifling, effect on pressure; the motion of projectiles in a nonresisting medium and in air; computation and use of ballistic and range tables; accuracy and probability of fire; derivation of rules for correcting the errors which arise in gunnery practice; the penetration and effect of projectiles. GUNS: Computation of their elastic strength and shrinkage. AMMUNITION: Its description, preparation, supply, stowage, and use. ARMOR: Description of; use of armor and other protection of matériel and personnel. TORPEDOES: Their description and use GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control AMMUNITION: Its preparation and use	Interior and — Ballistics Accuracy and Probability of Fire. Ordnance Notes The Elastic Strength of Guns Text book of Ordnance and Gunnery

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Navigation.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS. including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling errors.</p> <p>PRACTICAL NAVIGATION.</p> <p>PRACTICAL SURVEYING.</p>	<p>Admiralty Manual for the Deviations of the Compass.</p> <p>Diehl's Practical Problems and the Compensation of the Compass in the United States Navy.*</p>
<i>English.</i>	2	4	<p>INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retorsion; blockade; contraband of war; right of search; ship's papers and nationality; prizes; privateering; piracy; the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.</p>	<p>Woolsey's International Law.</p>
	1	4	<p>SPECIAL INSTRUCTIONS: General description of the human body and its functions; the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction Fridays, 7:30 to 9:30 p. m., additional.)</p>	<p>Martin's The Human Body and the Effects of Narcotics.</p>

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship.	2	4	<p>NAVAL CONSTRUCTION: Definitions: history and practice of shipbuilding in iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage, resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities, steam steering gear, steam capstan; plans of ships and reproduction in model loft; finding the displacement of ships and center of buoyancy, etc.</p>	<p>Special Notes and Lectures Navy Department Publications. White's Manual of Naval Architecture Welch's Text-book of Naval Architecture</p>
Steam Engineering.	3	4	<p>MARINE ENGINES: General description of modern marine engines and their dependencies: expansion of steam, piston speed and size of cylinders, uses and construction of parts of a marine engine, calculations on twisting and bending moments: principles and construction of condensers and pumps, types of valves and valve gear, and valve diagrams: principles and construction of various types of propellers; the indicator and its diagrams, power of an engine and calculations relating thereto, lectures on the metallurgy of iron and steel, the production of bronzes and alloys with reference to their use in marine engineering.</p>	<p>Watson's Marine Engineering.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering—Continued.</i>	2	4	BOILERS: Various types and efficiency of steam boilers; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers; fuels, solid and liquid; combustion of, with the methods of their application under natural and forced draft, their comparative qualities and properties, with instructions as to their selection for, and care of, as steam fuels; practical tests of the calorific value of fuels.	Seaton's Marine Engineering. Stromeyer's Marine Boiler Management and Construction.
	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected, and the resistance offered to these strains; relative value of materials used in machinery as to cost and strength; testing materials; principles and considerations governing the design, drawing, specifications, and proportions of the various parts of engines and boilers, with practical application in the designing room.	Unwin's Elements of Machine Design—Parts I and II.
<i>Mechanics.</i>	3	4	Same as for the line division.	Same as for the line division.
<i>Physics.</i>	3	4	Same as for the line division.	Same as for the line division.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship.	3	4	Course of the first term continued.	Same as for the first term.
Steam Engineering.	3	4	MARINE ENGINES: Objects of test trials, boiler trials and their results; friction of the engine, and the dynamometer, standard methods and examples of engine trials. Physical properties of steam; convertibility of heat and work; theory of the steam engine; air and heat engines, efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction, and reevaporation; experiments on the steam engine and the methods of determining its efficiency.	Lineham & Marham Engineering Part I Cottrell & Steam Engine Considered as a 1st Machine
	3	4	BOILERS: Designing and drawing.	Same as for the first term with notes
	3	4	DESIGNING MACHINERY: Designing and drawing.	Same as for the first term with notes
	3	4	EXPERIMENTAL ENGINEERING: Tests and experiments; standardizing indicators, steam and vacuum gauges, recording and measuring instruments, etc.; tests of fuels and lubricants, determination of strengths and elasticities of metals with the testing-machine, engine and boiler tests; dynamometric tests of propellers, etc.	Carpenter & Experimental Engineering
	3	4	SPECIAL INSTRUCTION: Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship					1	1	3	4	2	3
Ordnance							3	5		
Navigation						2	4	4		
Steam Engineering					3	3			8	12
Mechanics					5	4½	3		3	
Physics				4 F	4	4	3		3	
Mathematics	6	5	5	5						
English	5	5	4	2	1	1		2		
Languages	5	5½	3	2	1 F	1 F				
Drawing			4	2½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics		½ F		½ F
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F Friday 7:30 to 9:30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Department.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Seamanship			M. (3)	T. W. Th. (3)	T. W. (3)
Ordnance				T. Th. (2), F. (3)	
Navigation				M. (3), W. F. & (1)	
Steam Engineering			W. Th. F. (3)		{ W. F. & (1), T. Th. (2), M. Th. F. (3).
Mechanics			M. T. W. F. (1), Th. (2)	M. W. F. (2)	M. W. F. (2)
Physics			M. T. W. F. (2)	M. T. Th. (1)	M. T. Th. (1)
Mathematics	M. T. W. Th. F. & (1)	M. T. W. Th. F. (2)			
English	M. T. W. Th. F. (2)	M. F. & (1), T. (3)	Th. (1)		
Language	M. T. W. Th. F. (3)	T. W. Th. (1)	F. (7.30 to 9.30 p.m.) *		
Drawing		M. W. Th. F. (3)	T. (3), S. (1)		

SECOND TERM.

Seamanship			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Ordnance				M. T. W. Th. (2), F. (3)	
Navigation			M. T. (3)	M. T. Th. F. (1)	
Steam Engineering			W. Th. F. (3)		{ M. T. W. Th. F. (1), M. W. (2), T. F. (3), T. Th. F. (2).
Mechanics			M. W. Th. F. & (1)		
Physics		{ M. (2), T. W. F. (1), F. (7.30 to 9.30 p.m.) *	M. T. Th. F. (2)		
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
English	M. T. W. Th. F. (3)	M. Th. (1)	T. (1)	W. (1) F. (2)	
Language	M. T. W. Th. F. (2), S. (1)	W. Th. (3)	F. (7.30 to 9.30 p.m.) *		
Drawing		T. F. (3) & (1)			

Special instruction (Physiology and Hygiene) S. (1) & F. (7.30 to 9.30 p.m.)

TABLE OF COEFFICIENTS.

DEPARTMENT AND SUBJECTS.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline { Conduct ... Efficiency	3 1	5 3	7 5	8 8	8 8	160	160		
<i>Seamanship.</i>									
Seamanship, Naval Construction, and Naval Tactics *			3	13	8		44	56	32
Practice Cruise				2		72			
<i>Ordnance.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery				15		60		44	
Ordnance and Gunnery									
<i>Navigation.</i>									
Astronomy, Navigation, and Surveying			3	12			12	44	
Practice Cruise				2		68			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers			8					20	
Summer Practical Work			2		5	44			
Marine Engines					10				72
Designing Machinery					12				36
Boilers					8		184		40
<i>Mechanics.</i>									
Differential and Integral Calculus, and Mechanics			12						
Least Squares and Strength of Materials				5	5	68			
Mechanics					5		88		
<i>Physics.</i>									
Chemistry and Physics		4							
Physics			10	5	5	80	80		
<i>Mathematics.</i>									
Algebra and Geometry	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry		10				60	60		
<i>English.</i>									
English and History	5		2						
English and Law		5					36		
International Law				4		52		24	
<i>Languages.</i>									
French, and Spanish	5	5	2			52	52	28	28
<i>Drawing.</i>									
Mechanical Drawing		6	3			36	36		
<i>Miscellaneous.</i>									
Special Instructions (Physiology and Hy- giene)				2	2	8	8		
Cruise Report								16	16
Navigation Note Book, † Journals, and Station Bills								8	16
Maxima for each class	76	152	228	304	304	760	760	240	2

* Seamanship and Naval Tactics for line division alone.

† In making up the standing for a year the second term is given double the weight of the first †

‡ Navigation note-books for line division alone.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, untying, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signals; Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE.

Infantry, schools of the squad, company, and battalion, in close and extended orders; artillery, schools of the battery and battalion; exercise and target practice with small arms and guns of main and secondary batteries; exercise with cut-throat sword, and broadsword; handling and firing torpedoes; use of Richle and Rodman testing machines; determinations of velocities with the Le Boulenger and Schultz chronoscopes; experimental determination of range tables, also of the wind and drift; the preparation, inspection, care, and preservation of ordnance material.

Six medals are awarded annually for marksmanship: Gold, silver, and bronze medals to the cadets of the first class, as first, second, and third prizes, respectively for excellence in rapid-fire gun practice; and gold, silver, and bronze medals to the cadets of the second class, as first, second, and third prizes, for excellence in practice with the service rifle and revolver.

In June, 1895, the medals for rapid-fire gun practice were awarded as follows:

Gold medal to Cadet R. Z. Johnston.

Silver medal to Cadet A. T. Chester.

Bronze medal to Cadet J. D. Sayers.

The medals for small-arm marksmanship for 1895 were awarded as follows:

Gold medal to Cadet T. C. Hart.

Silver medal to Cadet P. L. Pratt.

Bronze medal to Cadet S. G. Magill, jr.

At the competitive company drill on June 5, 1895, the battalion colors were awarded to the Second Company—Cadet-Lieutenant P. M. Rannon, commanding—being the best-drilled company.

NAVIGATION.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying, and constructing a chart of, a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations and times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact coefficients, and the heeling and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Shopwork:

The Pattern Shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining, etc., to finished pattern work.

The Foundry: Iron and brass casting; the making of bronzes, alloys, etc.

The Blacksmith Shop: Forging, welding, etc.; tempering, case hardening, etc.; bending and quenching tests of metals.

The Boiler Shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The Machine Shop: Vise bench work, machine tool work including the setting of work, turning, planing, boring, slotting, etc.; pipe fitting; building, erection, and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Shipwork:

Management of main and auxiliary engines: Getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water-tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while manouvering at sea; determining the condition and locating defects in machinery while in motion; causes and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under banked fires; coming to anchor; overhauling machinery; cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary Casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burnt grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Instruments: Use of slide rule, averaging machine, apparatus for testing oils and smoke gases; standardizing steam gauges and indicators.

Miscellaneous: Preparing specifications for purchase of machinery and stores; testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week, the number of each exercise is indicated by a figure in parentheses.

FIRST CLASS.

Academic months.	Week ending	First division.	Second division.	Third division	Fourth division
1895.					
Oct.....	5	Company.	Target, great guns(4) Seamanship (1).	Artillery.	Steam tactics (4) Seamanship
	12	Artillery.	Steam tactics (4). Battery drill (1).	Company.	Target great guns Battery drill
	19	Target, great guns(4) Seamanship (1).	Company.	Steam tactics (4). Seamanship (1).	Artillery
	26	Steam tactics (4). Battery drill (1).	Artillery.	Target, great guns(4) Battery drill (1).	Company
Nov	2	Battalion Infantry.	Battalion Infantry.	Battalion Infantry	Battalion Infantry
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery	Battalion Artillery
	30	Steam.	Practical ordnance.	Practical electricity.	Sword exercise
Dec....	7	Practical electricity.	Sword exercise.	Steam.	Practical ordnance
	14	Practical ordnance.	Steam.	Sword exercise.	Practical electricity
	21	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
	28	NO DRILLS. See note.			
1896.					
Jan....	4	Steam.	Practical ordnance.	Practical electricity	Sword exercise
	11	Practical electricity.	Sword exercise.	Steam.	Practical ordnance
	18	Practical ordnance.	Steam.	Sword exercise.	Practical electricity
	25	Sword exercise.	Practical electricity.	Practical ordnance	Steam
Feb....	1	SEMI-ANNUAL EXAMINATION. No drills.			
	8	Steam.	Seamanship.	Practical electricity	Sword exercise
	15	Practical electricity.	Sword exercise.	Steam.	Seamanship
	22	Seamanship.	Steam.	Sword exercise.	Practical electricity
	29	Sword exercise	Practical electricity.	Seamanship.	Steam.
Mar...	7	Battalion Artillery (4) Seamanship (1).	Battalion Artillery (4) Seamanship (1).	Battalion Artillery (4) Seamanship (1).	Battalion Artillery (4) Seamanship (1).
	14	Target great guns (4) Battery drill (1). Boats (1).	Steam tactics (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1) Boats (1).	Torpedoes (4). Seamanship (1). Boats (1).
	21	Skirmish (4). Seamanship (1). Boats (1).	Torpedoes (4). Landing party (1) Boats (1).	Target, great guns(4) Seamanship (1) Boats (1).	Steam tactics (4) Landing party (1). Boats (1).
	28	Steam tactics (4). Seamanship (1) Boats (1).	Target, great guns (4) Battery drill (1) Boats (1).	Torpedoes (4) Seamanship (1) Boats (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr....	4	Torpedoes (4). Landing party (1). Boats (1).	Skirmish (4) Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1) Boats (1).	Target great guns (4) Seamanship (1). Boats (1).
	11	Steam tactics (4). Landing party (1). Seamanship (1).	Steam tactics (4). Seamanship (2)	Steam tactics (4) Landing party (1). Seamanship (1).	Steam tactics (4) Seamanship (2)
	18	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	25	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship

FIRST CLASS—Continued.

Aca- demic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896.					
May.....	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	9	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).
	16	Battalion Infantry(5) Seamanship (1).	Battalion Infantry(5) Seamanship (1).	Battalion Infantry(5) Seamanship (1).	Battalion Infantry(5) Seamanship (2).
	M.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	T.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	S.23	Battle drill.	Battle drill.	Battle drill.	Battle drill.
June 1 to 10.	} ..	ANNUAL EXAMINATION.			
June 10 to Aug. 28	} ..	Practice cruise.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month. Cadets of the Engineer Division will take part in drills on board the *Bancroft* when underway, in "Practical electricity," in "General steam tactics," and at "Fire quarters." At other times they will have "Steam drill."

SECOND CLASS.

Aca- demic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1895.					
Oct.....	5	Company.	Target, machine guns (4).	Artillery.	Steam tactics (4).
	12	Artillery.	Seamanship (1). Steam tactics (4). Battery drill (1).	Company.	Seamanship (1). Target, machine guns (4). Battery drill (1).
	19	Target, machine guns (4). Seamanship (1).	Company.	Steam tactics (4).	Artillery.
	26	Steam tactics (4). Battery drill (1).	Artillery.	Seamanship (1). Target, machine guns (4). Battery drill (1).	Company.
Nov.....	2	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	30	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
Dec.....	7	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	14	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	21	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
	28	NO DRILLS. See note.			
1896.					
Jan.....	4	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	11	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	18	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	25	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
Feb.....	1	SEMI-ANNUAL EXAMINATION. No drills.			

SECOND CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896.					
Feb	8	Steam.	Practical ordnance.	Steam.	Sword exercise.
	15	Steam.	Sword exercise.	Steam.	Practical ordnance.
	22	Practical ordnance.	Steam.	Sword exercise.	Steam.
	29	Sword exercise.	Steam.	Practical ordnance.	Steam.
Mar. . . .	7	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).
	14	Target, great guns (4). Battery drill (1). Boats (1).	Steam tactics (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).
	21	Skirmish (4). Seamanship (1). Boats (1).	Target, small arms (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).
	28	Steam tactics (4). Seamanship (1). Boats (1).	Target, great guns (4). Battery drill (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr.	4	Target, small arms (4). Landing party (1). Boats (1).	Skirmish (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).
	11	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	18	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	25	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
May	9	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	16	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).
	M.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	T.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	S. 23	Battle drill.	Battle drill.	Battle drill.	Battle drill.

June 1 }
to 10. }

ANNUAL EXAMINATION.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on Wednesday afternoon in each month.

SECOND CLASS—Continued.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Signals, p. m.	Machine shop, a. m. Gun house, p. m.
	2	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Signals, p. m.
	3	Machine shop, a. m. Signals, p. m.	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Gun house, p. m.
	4	Running steam cutters, a. m. Gun house, p. m.	Running steam cutters, a. m. Signals, p. m.	Running steam cutters, a. m. Gun house, p. m.	Running steam cutters, a. m. Target, small arms, p. m.
	5	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.
	6	Machine shop, a. m. Target, machine guns, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Steam tactics, p. m.
	7	Machine shop, a. m. Steam tactics, p. m.	Machine shop, a. m. Target, machine guns, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Boats, p. m.

SECOND CLASS—Continued.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	8	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Steam tactics, p. m.	Machine shop, a. m. Target, machine guns, p. m.	Machine shop, a. m. Target, small arms p. m.
	9	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Steam tactics, p. m.	Machine shop, a. m. Target, machine guns, p. m.
	10	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.

THIRD CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1895.					
Oct.....	5	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship (1).
	12	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	19	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	26	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
Nov.....	2	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
Dec.....	30	Steam.	Seamanship.	Target, small arms (3) Great guns (2). Steam.	Sword exercise.
	7	Target, small arms (3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	14	Seamanship.	Steam.	Sword exercise.	Target, small arms (3) Great guns (2).
	21	Sword exercise.	Target, small arms (3) Great guns (2).	Seamanship.	Steam.
28 NO DRILLS. See note.					
1896.					
Jan.....	4	Steam.	Seamanship.	Target, small arms (3) Great guns (2). Steam.	Sword exercise.
	11	Target, small arms (3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	18	Seamanship.	Steam.	Sword exercise.	Target, small arms (3) Great guns (2).
	25	Sword exercise.	Target, small arms (3) Great guns (2).	Seamanship.	Steam.
Feb..... 1 SEMI ANNUAL EXAMINATION. No drills.					
Mar.....	8	Steam.	Signals (3). Seamanship (2).	Target, small arms (3) Great guns (2). Steam.	Sword exercise.
	15	Target, small arms (3) Great guns (2).	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	22	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Target, small arms (3) Great guns (2).
	29	Sword exercise.	Target, small arms (3) Great guns (2).	Signals (3). Seamanship (2).	Steam.
	7	Battalion Artillery (4) Seamanship (1).	Battalion Artillery (4) Seamanship (1).	Battalion Artillery (4) Seamanship (1).	Battalion Artillery (4) Seamanship (1).
	14	Target, small arms (4) Battery drill (1). Boats (1).	Seamanship (5). Boats (1). Boats (5).	Skirmish (4). Battery drill (1). Boats (1).	Boats (4). Seamanship (1). Boats (1).
	21	Skirmish (4). Seamanship (1). Boats (1).	Landing party (1)	Target, small arms (4) Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).

THIRD CLASS—Continued.

Academic months.	Week ending	First division.	Second division.	Third division.	Fourth division.
1896.					
Mar....	28	Seamanship (5). Boats (1).	Target, small arms (4). Battery drill (1). Boats (1).	Boats (3). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr	4	Boats (3). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).
	11	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	18	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (1). Seamanship (1).
	25	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May.....	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship.
	9	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Landing party (1). Company (4).
	16	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Seamanship (2). Battalion Infantry.
	M.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	T.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	S 23	Battle drill.	Battle drill.	Battle drill.	Battle drill.

June 1
to 10.

ANNUAL EXAMINATION.

June 10
to Aug 28

Practice cruise.

Drills will be suspended from December 24 to January 2. There will be Fire quarters on Wednesday afternoon in each month.

FOURTH CLASS.

Academic months.	Week ending	First division.	Second division.	Third division.	Fourth division.
1896.					
Oct..	5	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship.
	12	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill.
	19	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	26	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
Nov	2	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	30	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).
Dec	7	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).
	14	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.
	21	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.
	28				

NO DRILLS. See note

FOURTH CLASS—Continued.

Academic months	Week ending	First division.	Second division.	Third division.	Fourth division.
1896.					
Jan	4	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	11	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	18	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	25	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Feb	1	SEMI ANNUAL EXAMINATION. No drills.			
	8	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).
	15	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).
	22	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.
	29	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Mar	7	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).
	14	Gymnastics (4). Battery drill (1). Boats (1).	Seamanship (5). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).
	21	Skirmish (4). Seamanship (1). Boats (1).	Boats (5). Landing party (1).	Gymnastics (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).
	28	Seamanship (5). Boats (1).	Gymnastics (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr	4	Boats (5). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Gymnastics (4). Seamanship (1). Boats (1).
	11	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	18	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	25	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	9	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	16	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).
	M.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	T.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	S.	Battle drill.	Battle drill.	Battle drill.	Battle drill.
Sept	7	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	14	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	21	School of soldier.* Artillery.	School of soldier.* Artillery.	School of soldier.* Artillery.	School of soldier.* Artillery.
	28	School of soldier.* Artillery.	School of soldier.* Artillery.	School of soldier.* Artillery.	School of soldier.* Artillery.

* Swimming daily.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

	† Study periods.	* Practice cruise.	† Engineer Division.
Practical instruction in chemistry.....	13		13
Gymnastics and boxing.....	17	17	17
Swimming.....			24
Dancing.....	18	18	18

The instructions in seamanship and gunnery on board of the Practice Steamers are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FIFTY-SECOND ACADEMIC YEAR.

1896-'97.

WASHINGTON:
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1896.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the Administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, United States Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a Board of Visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities for training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was removed back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 1st of March, 1869, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1869.

The term of the academic course was changed by law, March 8, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mathematics, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the academy in 1867. After an interval of four years, in October, 1871, a new class of cadet engineers was admitted. This class finished a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress approved August 5, 1842, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps." And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which have occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a

surplus of graduates, those who do not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress approved March 2, 1889, provides that "the Academic Board of the Naval Academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the Navy and Marine Corps of the Navy shall bear to the number of vacancies to be supplied from the Academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the Navy; and the cadets so assigned to the line and Marine Corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the Navy, and the cadets so assigned to the Engineer Corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the Engineer Corps of the Navy, and the cadets shall thereafter, and until final graduation, at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and Marine Corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the Navy and Marine Corps; and the vacancies in the lowest grades of the commissioned officers of the Engineer Corps of the Navy shall be filled in like manner by appointments from the final graduates of the Engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the Academic Board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the Academic Board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years course below twelve in each year to the line of the Navy, and not less than two shall be appointed annually to the Engineer Corps of the Navy, nor less than one annually to the Marine Corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available;"

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the Academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

	Assumed command.
Commander Franklin Buchanan	Sept. 3, 1845
Commander George P. Upshur	Mar. 15, 1847
Commander Cornelius K. Stribling	July 1, 1850
Commander Louis M. Goldsborough	Nov. 1, 1853
Captain George S. Blake	Sept. 15, 1857
Rear-Admiral David D. Porter	Sept. 9, 1865
Commodore John L. Worden	Dec. 1, 1869
Rear-Admiral C. R. P. Rodgers	Sept. 22, 1874
Commodore Foxhall A. Parker	July 1, 1878
Rear-Admiral George B. Balch	Aug. 2, 1879
Rear-Admiral C. R. P. Rodgers	June 13, 1881
Captain F. M. Ramsay	Nov. 14, 1881
Commander W. T. Sampson	Sept. 9, 1886
Captain R. L. Phythian	June 30, 1890
Captain P. H. Cooper	Nov. 15, 1894

BOARD OF VISITORS, JUNE, 1896.

Honorable J. B. ROBINSON, House of Representatives, Pennsylvania,
President.

J. C. RICHBERG, Esq., Illinois, *Vice-President.*

Honorable C. H. GIBSON, United States Senate, Maryland.

Honorable J. C. BURROWS, United States Senate, Michigan.

Honorable P. B. LOW, House of Representatives, New York.

Honorable ADOLPH MEYER, House of Representatives, Louisiana.

General J. C. TAPPAN, Arkansas.

ROBERT B. HOWELL, Esq., Nebraska.

Captain J. W. WEEKS, Massachusetts.

Professor E. S. HOLDEN, California.

CHARLES SCOTT, Esq., Mississippi.

F. WOLCOTT JACKSON, Esq., New Jersey.

ACADEMIC CALENDAR.
1896-'97.

1896.	
October 1.—Beginning of first term.....	Thursday.
1897.	
January 25-30.—Semi-annual examination.....	Monday-Satur.
January 30.—End of first term	Saturday.
May 15.—Examination of candidates for admission as naval cadets	Saturday.
May 31.—End of academic year, 1896-'97	Monday.
May 31-June 5.—Annual examination	Monday-Saturday.
September 1.—Examination of candidates for admission as naval cadets	Wednesday.
October 1.—Beginning of first term, 1897-'98	Friday.

The academic months end on the following days:

1896-'97.			
October.....	October 31	February	February 27
November	November 28	March	March 27
December.....	December 26	April	April 24
January	January 23	May	May 22
1897-'98.			
October.....	October 30	December	December 30
November	November 27	January.....	January 24

CALENDAR FOR 1896-'97.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
---	---	1	2	3	4	5	---	---	---	---	1	2	3
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30	---	---	---	25	26	27	28	29	30	---
OCTOBER.							MAY.						
---	---	---	---	1	2	3	---	---	---	---	---	---	1
4	5	6	7	8	9	10	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22
25	26	27	28	29	30	31	23	24	25	26	27	28	29
---	---	---	---	---	---	---	30	31	---	---	---	---	---
NOVEMBER.							JUNE.						
1	2	3	4	5	6	7	---	---	1	2	3	4	5
8	9	10	11	12	13	14	6	7	8	9	10	11	12
15	16	17	18	19	20	21	13	14	15	16	17	18	19
22	23	24	25	26	27	28	20	21	22	23	24	25	26
29	30	---	---	---	---	---	27	28	29	30	---	---	---
DECEMBER.							JULY.						
---	---	1	2	3	4	5	---	---	---	---	1	2	3
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30	31	---	---	25	26	27	28	29	30	31
JANUARY.							AUGUST.						
---	---	---	---	---	1	2	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	11	12	13	14
10	11	12	13	14	15	16	15	16	17	18	19	20	21
17	18	19	20	21	22	23	22	23	24	25	26	27	28
24	25	26	27	28	29	30	29	30	31	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---	---
FEBRUARY.							SEPTEMBER.						
---	1	2	3	4	5	6	---	---	---	1	2	3	4
7	8	9	10	11	12	13	5	6	7	8	9	10	11
14	15	16	17	18	19	20	12	13	14	15	16	17	18
21	22	23	24	25	26	27	19	20	21	22	23	24	25
28	---	---	---	---	---	---	26	27	28	29	30	---	---
MARCH.							OCTOBER.						
---	1	2	3	4	5	6	---	---	---	---	1	2	---
7	8	9	10	11	12	13	3	4	5	6	7	8	9
14	15	16	17	18	19	20	10	11	12	13	14	15	16
21	22	23	24	25	26	27	17	18	19	20	21	22	23
28	29	30	31	---	---	---	24	25	26	27	28	29	30
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OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

Superintendent,

CAPTAIN P. H. COOPER.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT-COMMANDER A. ROSS.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT G. A. MERRIAM.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER EDWIN WHITE.

Assistants,

LIEUTENANT-COMMANDER R. T. JASPER,

LIEUTENANT T. PORTER,

LIEUTENANT W. A. MARSHALL,

LIEUTENANT D. DANIELS.

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LIEUTENANT W. S. BENSON,

LIEUTENANT P. W. HOURIGAN.

ORDNANCE.

Head of Department,

LIEUTENANT ALEXANDER MCCRACKIN.

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LIEUTENANT W. R. SHOEMAKER,

ENSIGN E. MOALE, JR.

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 LIEUTENANT A. W. GRANT,
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 LIEUTENANT H. G. DRESEL,
 ENSIGN W. V. PRATT,
 ENSIGN W. H. BUCK.

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Head of Department,

LIEUTENANT-COMMANDER W. P. POTTER.

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 LIEUTENANT C. B. T. MOORE,
 LIEUTENANT C. C. ROGERS,
 LIEUTENANT G. R. CLARK,
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 ENSIGN VICTOR BLUE,
 PROFESSOR W. W. FAY, A. M.,
 PROFESSOR A. N. BROWN.

LANGUAGES.

Head of Department,

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 PROFESSOR JULES LEROUX,
 PROFESSOR HENRI MARION,
 PROFESSOR SAMUEL GARNER, PH. D.,
 ASSISTANT PROFESSOR P. J. DES GARENNES, A. M.

DRAWING.

Head of Department,

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Assistants,

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 ENSIGN A. L. NORTON,
 PROFESSOR C. F. BLAUVELT.

Director of Physical Training,

PASSED ASSISTANT SURGEON A. M. D. McCORMICK.

Instructor,

MATTHEW STROHM.

OFFICERS NOT ATTACHED TO ACADEMIC STAFF.

LIEUTENANT-COMMANDER E. D. F. HEALD, *in Charge of Ships.*

MEDICAL DIRECTOR T. C. WALTON.

SURGEON G. E. H. HARMON.

PASSED ASSISTANT SURGEON G. H. BARBER.

PASSED ASSISTANT SURGEON L. L. VON WEDEKIND.

PAY DIRECTOR T. T. CASWELL, *Pay Officer and General Storekeeper.*

PAYMASTER J. P. LOOMIS, *Commissary and Cadets' Storekeeper.*

PASSED ASSISTANT ENGINEER H. O. STICKNEY.

CHAPLAIN H. H. CLARK.

PROFESSOR M. OLIVER, *Librarian.*

J. M. SPENCER, *Assistant Librarian.*

R. M. CHASE, *Secretary.*

Santee and Ships.

BOATSWAIN J. S. SINCLAIR.

BOATSWAIN C. F. PIERCE.

GUNNER A. A. PHELPS.

CARPENTER J. B. FLETCHER.

Mates,

C. J. MURPHY.

W. G. SMITH.

Marine Officers.

LIEUTENANT-COLONEL McLANE TILTON, *Commanding Marines.*

FIRST LIEUTENANT C. A. DOYEN.

ACADEMIC BOARD.

THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP.

THE HEAD OF THE DEPARTMENT OF ORDNANCE.

THE HEAD OF THE DEPARTMENT OF NAVIGATION.

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH.

THE HEAD OF THE DEPARTMENT OF LANGUAGE.

THE HEAD OF THE DEPARTMENT OF DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

CADET LIEUTENANT-COMMANDER,
W. G. DU BOSE.

CADET LIEUTENANT AND ADJUTANT,
J. W. POWELL.

CADET ENSIGN AND AID,
E. F. EGGERT.

CADET CHIEF PETTY OFFICER,
W. R. SEXTON.

CADET PASSED ASSISTANT ENGINEER,
F. L. SHEFFIELD.

CADET ASSISTANT ENGINEER,
G. WEBBER.

CADET LIEUTENANTS,
HEPBURN, A. J., REYNOLDS, W. H.,
MC CARTHY, A. H., YARNELL, H. E.

CADET JUNIOR LIEUTENANTS,
FALCONER, W. M., MURFIN, O. G.,
JONES, N. L., OVERSTREET, L. M.

CADET ENSIGNS,
MCDOWELL, W., SARGENT, L. R.,
PERRILL, H. P., BOYD, D. F., JR.

CADET PETTY OFFICERS OF THE FIRST CLASS,

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
HOUSTON,	MILLER,	THELEEN,	HENDERSON,
PRESSEY,	HOLMAN,	WILLIAMS, HILARY,	CHASE,
GRAEME,	KEMPFF,	SMITH, A. ST. C., JR.,	DUNCAN,
KAUTZ.	ASSERSON.	HART.	GILES.

CADET PETTY OFFICERS OF THE SECOND CLASS,

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
LANDIS,	MAGILL,	OWEN, A. C.	WHITE, W. R.
PINNEY,	OWENS, C. T.	HALLIGAN,	WATTS,
WILLIAMS, HENRY.	CRONAN,	NELSON,	SMITH, G. L.,
BOONE.	EVANS, F. T.	WRIGHT, H. T	ELSON.

SUMMER CRUISE, 1896.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP MONONGAHELA.

June 6 to August 28.

COMMANDER E. WHITE, Commanding.
LIEUTENANT F. E. BEATTY, Executive Officer.
LIEUTENANT C. J. BOUSH, Navigator.
LIEUTENANT A. W. GRANT, Watch Officer.
LIEUTENANT J. E. CRAVEN, Watch Officer.
LIEUTENANT T. SNOWDEN, Watch Officer.
LIEUTENANT P. W. HOURIGAN, Watch Officer.
LIEUTENANT J. A. HOOGEWERFF, Watch Officer.
ENSIGN E. MOALE, JR., Watch Officer.
SURGEON C. BIDDLE.
ASSISTANT SURGEON E. M. SHIPP.
PASSED ASSISTANT PAYMASTER F. T. ARMS.
CHAPLAIN A. L. ROYCE.

First Class—Line Division.

Asserson, W. C.	Henderson, R. W.	McDowell, W.	Sargent, L. B.
Boyd, D. F., jr.	Hepburn, A. J.	Magill, S. G., jr.	Sexton, W. B.
Chase, G.	Holman, F. R.	Miller, C. R.	Smith, A. St. C., jr.
Du Bose, W. G.	Hoopes, E. T.	Murfin, O. G.	Theleen, D. E.
Duncan, O. D.	Houston, V. S.	Overstreet, L. M.	White, W. R.
Eggert, E. F.	Jones, N. L.	Owen, A. C.	Williams, Hilary
Falconer, W. M.	Kautz, A.	Perrill, H. P.	Yarnell, H. E.
Giles, W. P.	Kempff, C. S.	Powell, J. W.	
Gracme, J. W.	Landis, I. F.	Pressey, A. W.	
Hart, T. C.	McCarthy, A. H.	Reynolds, W. H.	

Second Class.

Abele, C. A.	Elson, H. J.	Macy, U. S.	Smith, G. L.
Babcock, J. F.	Evans, F. T.	Mannix, D. P.	Sweet, G. C.
Boone, C.	Gilmer, J. B.	Marble, R. N., jr.	Tardy, W. B.
Briggs, Z. E.	Halligan, J., jr.	Nelson, C. P.	Watts, W. C.
Brown, J. J.	Hand, J. A., jr.	Peterson, R. L.	Wells, W. B.
Brown, M. H.	Hanrahan, D. C.	Pettengill, G. T.	Williams, Henry
Cotton, L. A.	Huntington, A. F.	Pinney, F. L.	Woods E.
Cronan, W. P.	Johnson, T. L.	Roper, W. G.	Wright, H. T.
Dinger, H. C.	McIntyre, E. W.	Shane, L.	

Third Class

Bailey, J. E.	Branch, F. O.	Comba, J. R.	Forman, C. W.
Beckner, J. T.	Brinser, H. L.	Courtney, C. E.	Frawley, W. J.
Bisell, H. H.	Buchanan, A.	Dungan, P. B.	Gleason, H. M.
Bisect, G. A.	Buttrick, J. T.	Evans, H. H.	Greenslade, J. W.
Bloch, C. C.	Clement, J. W. L., jr.	Fenner, E. B.	Hatch, C. B., jr.
Bowers, J. T.	Cole, C. W.	Fischer, C. H.	Helm, F. P., jr.

Third Class—Continued.

Horne, F. J.	McCarty, S. H.	Sadler, E. J.	Vincent, R. W.
Hunt, W. M.	Major, S. I. M.	Sayles, W. R.	Watson, A. E.
Jeffers, W. N.	Mathews, J. E.	Shackford, C.	Weichert, E. A.
Johnson, A. W.	Miller, W. S.	Shapley, L. S.	West, A. S.
Kalbfus, E. C.	Morgan, C. E.	Smith, C. W.	White, R. D.
Kimberly, V. A.	Morrison, F.	Sparrow, H. G.	Wood, W. C.
Lackey, H. E.	Northup, A. W.	Taussig, J. K.	Woodward, C. H.
Larimer, E. B.	Pope, R. E.	Thomas, S. B.	Wyman, H. L.
Lewis, J. E.	Royall, H. H.	Tomb, J. H. ¹	Yates, F. H.

Fourth Class.

Case, W. S.	Cresap, E. O.	Kearny, P. ^d	Turner, R. F.
Cocke, H. C.	Doyle, S. H. R.		

¹ Transferred, sick, to hospital at Funchal, Madeira, July 17, 1896 ; returned to Naval Academy August 29, 1896.

^d Dismissed August 26, 1896.

UNITED STATES PRACTICE SHIP BANCROFT.

*June 6 to August 26.*LIEUTENANT-COMMANDER B. F. TILLEY, *Commanding.*LIEUTENANT D. DANIELS, *Executive Officer.*LIEUTENANT J. M. ORCHARD, *Navigator.*LIEUTENANT H. PHELPS, *Watch Officer.*ENSIGN A. L. NORTON, *Watch Officer.*

PASSED ASSISTANT SURGEON A. M. D. McCORMICK.

PASSED ASSISTANT ENGINEER H. O. STICKNEY.

ASSISTANT ENGINEER L. M. NULTON.

NAVAL CADETS.

First Class—Engineer Division.

Anding, S. W. ¹	Keenan, E. C.	Owens, C. T.	Sheffield, F. L.
Collins, H. L.	Leahy, W. D.	Pratt, P. L.	Van Orden, G.
Graham, A. T. ²	Mahony, D. S.	Richardson, L. C.	Webber, G.
Jenson, H. N.	Morse, J. W.	Roehle, C. C. ³	

Second Class.

Applewhite, S. C.	Faller, G. W.	Love, J. M., jr.	Tarrant, W. T.
Briggs, W. G.	Farrin, T. B.	Madison, Z. H., jr. ⁴	Thorpe, G. C. ⁴
Brockway, B. L.	Graham, J. S.	Mitchell, A. N.	Williams, Y. S.
Constien, E. T.	Kress, J. C.	Schofield, J. A.	

SYNOPSIS OF THE CRUISE, 1896.

MONONGAHELA.

Cadets, first class, line division; the second class; third class; and 6 members of the fourth class, embarked June 6.

Sailed from Annapolis for Funchal, Madeira, June 8.

Arrived at Funchal, Madeira, July 7.

Sailed from Funchal July 18.

Arrived at Lynnhaven Bay August 22.

Arrived at Annapolis August 28.

BANCROFT.

Cadets, first class, engineer division; and 15 cadets of the second class embarked June 6.

Sailed from Annapolis June 8.

Arrived at Newport News, Va., June 10. Sailed June 17.

Arrived at Chester, Pa., June 18. Sailed June 19.

Arrived at Philadelphia, Pa., June 19. Sailed July 6.

Arrived at Staten Island July 7. Sailed July 13.

Arrived at navy-yard, Brooklyn, July 13. Sailed July 28.

Arrived at Bridgeport July 28. Sailed July 30.

¹ Transferred sick to hospital, Brooklyn, July 14.

² Transferred sick to hospital, Brooklyn, July 8.

³ Transferred sick to hospital, Philadelphia, July 5.

⁴ Granted emergency leave August 6.

Arrived at New London July 30. Sailed August 1.
 Arrived at Newport August 1. Sailed August 7.
 Arrived at Boston Navy Yard August 8. Sailed August 10.
 Arrived at Bath, Me., August 10. Sailed August 12.
 Arrived at Portsmouth August 12. Sailed August 15.
 Arrived at New York August 16. Sailed August 17.
 Arrived at Lynnhaven Bay August 18. Sailed August 22.
 Arrived at Annapolis August 23.
 Cruise ended August 26.

PRACTICAL INSTRUCTION AT NAVAL ACADEMY.

Naval cadets of fourth class.....	84
On board practice ships <i>Monongahela</i> and <i>Bancroft</i>	161
Absent on sick leave.....	1

CLASSES OF THE NAVAL CADETS AT THE BEGINNING OF THE ACADEMIC YEAR, 1896-'97.

[Corrected to October 3, 1896.]

*Naval cadets of the class appointed in 1891, performing required service afloat—
Line Division—27 members.*

Order of gen- eral merit.	Name.	State from which appointed	Date of admission.
*1	Smith, Stuart Farrar ¹	Pennsylvania.....	Sept. 4, 1891
*2	Greesbeck, William Gerard.....	Ohio.....	Sept. 4, 1891
3	Brumby, Frank Hardeman.....	Georgia.....	Sept. 6, 1891
4	Baldwin, Frank Pardee.....	New Jersey.....	Sept. 8, 1891
5	Davidson, William Christopher.....	South Dakota.....	Sept. 20, 1891
6	Laning, Harris.....	Illinois.....	May 19, 1891
7	Bannon, Philip Michael.....	Maryland.....	May 19, 1891
8	Chester, Arthur Tremaine.....	At large.....	May 19, 1891
9	Monaghan, John Robert.....	Washington.....	Sept. 7, 1891
10	Butler, Henry Varnum, jr.....	New York.....	Sept. 8, 1891
11	Walker, James Erling.....	North Carolina.....	Sept. 7, 1891
12	Cushman, William Reynolds.....	New York.....	Sept. 8, 1891
13	Todd, David Wooster.....	California.....	Sept. 6, 1891
14	Raby, James Joseph.....	Michigan.....	Sept. 9, 1891
15	Standley, William Harry.....	California.....	Sept. 7, 1891
16	Gherardi, Walter Rockwell.....	At large.....	Sept. 6, 1891
17	Klemann, John Valentine.....	New York.....	Sept. 10, 1891
18	Bennett, Kenneth Marratt.....	New Jersey.....	Sept. 6, 1891
19	McCormack, Michael James.....	Michigan.....	Sept. 9, 1891
20	Bagley, Worth.....	North Carolina.....	Sept. 7, 1891
21	Wadhams, Albion James.....	New York.....	Sept. 6, 1891
22	Barnes, Cassius Bartlett.....	Oklahoma.....	Sept. 7, 1891
23	Watson, Edward Howe.....	Kentucky.....	Sept. 7, 1891
24	Breckinridge, Joseph Cabell.....	Kentucky.....	Sept. 9, 1891
25	Knepper, Orlo Smith.....	Pennsylvania.....	Sept. 4, 1891
26	Hall, Newt Hamill.....	Texas.....	Sept. 7, 1891
27	Johnston, Rufus Zenas, jr.....	North Carolina.....	Sept. 10, 1891

Engineer Division—12 members.

1	Dick Thomas Merritt.....	South Carolina.....	Sept. 8, 1891
2	Mallory Charles King.....	Tennessee.....	Sept. 20, 1891
3	Mansfield, Newton.....	Ohio.....	Sept. 7, 1891
4	Garrison, Daniel Merabon.....	New Jersey.....	June 1, 1891
5	Karns Franklin D.....	Ohio.....	Sept. 20, 1891
6	Morton, James Proctor.....	Missouri.....	Sept. 9, 1891
7	Freeman, Frederick Newton.....	Indiana.....	Sept. 9, 1891
8	Walker, Charles Henry.....	Massachusetts.....	Sept. 8, 1891
9	Marshall, John Francis, jr.....	Texas.....	Sept. 8, 1891
10	Merritt, Darwin Robert.....	Iowa.....	Sept. 10, 1891
11	Dunn, Edward Howard.....	Connecticut.....	Sept. 8, 1891
12	Eckhardt, Ernest Frederick.....	Wisconsin.....	Sept. 8, 1891

¹ NOTE.—Pursuing special studies abroad.

*Naval cadets of the class appointed in 1892, performing required service afloat—
Line Division—26 members.*

Order of gen- eral merit.	Name.	State from which appointed.	Date of admission.
*1	Robinson, Richard Hallett.....	Ohio.....	Sept. 6, 1892
2	Holden, Jonas Hannibal.....	Vermont.....	May 20, 1892
3	Craven, Thomas Tingey.....	New Hampshire.....	Sept. 19, 1892
4	Poor, Charles Longstreet.....	New York.....	Sept. 6, 1892
5	Earle, Ralph.....	Massachusetts.....	Sept. 6, 1892
6	Kalbach, Andrew Edwin.....	Pennsylvania.....	July 1, 1892
7	Walker, Ralph Eric.....	Indiana.....	May 20, 1892
8	Wurtsbaugh, Daniel Wilbert.....	Texas.....	May 20, 1892
9	Wettengel, Ivan Cyrus.....	Colorado.....	Sept. 6, 1892
10	Tozer, Charles Maxson.....	New York.....	Sept. 19, 1892
11	Cluverius, Wat Tyler, jr.....	Louisiana.....	May 20, 1892
R 12	Kimball, Henry Swift.....	Massachusetts.....	Sept. 6, 1892
13	Wood, Duncan Mahon.....	Alabama.....	Sept. 30, 1892
14	Palmer, Leigh Carlyle.....	Missouri.....	Sept. 6, 1892
15	Kearney, Thomas Albert.....	Missouri.....	Sept. 6, 1892
16	MacArthur, Arthur, jr.....	Wisconsin.....	Sept. 6, 1892
17	Ridgely, Frank Eugene.....	At large.....	Sept. 6, 1892
18	Knox, Dudley Wright.....	Tennessee.....	Sept. 6, 1892
19	Gilpin, Charles Edward.....	Michigan.....	Sept. 6, 1892
20	Ellis, Mark Saint Clair.....	Arkansas.....	July 1, 1892
21	McCauley, Edward, jr.....	New York.....	Oct. 10, 1892
22	Jessop, Earl Percy.....	West Virginia.....	Sept. 6, 1892
23	Roys, John Holley.....	New York.....	Sept. 6, 1892
24	Mustin, Henry Croskey.....	Tennessee.....	Sept. 6, 1892
25	Curtin, Roland Irvin.....	Pennsylvania.....	Sept. 6, 1892
26	Bronson, Amon, jr.....	Nebraska.....	Sept. 30, 1892

Engineer Division—12 members.

*1	Leiper, Charles Lewis.....	Pennsylvania.....	Sept. 6, 1892
2	Lincoln, Gatewood Sanders.....	Missouri.....	May 20, 1892
3	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 13, 1892
4	Bisset, Henry Overstreet.....	Maryland.....	Sept. 6, 1892
5	Marshall, Albert Ware.....	Texas.....	Sept. 6, 1892
6	Burt, Charles Perry.....	Georgia.....	Sept. 6, 1892
7	Castleman, Kenneth Galleher.....	Kentucky.....	Sept. 6, 1892
8	Littlefield, William Lord.....	Massachusetts.....	Sept. 30, 1892
9	Washington, Pope.....	North Carolina.....	Sept. 7, 1892
10	Rice, George Benjamin.....	Kentucky.....	Sept. 6, 1892
11	Henry, James Buchanan, jr.....	New York.....	Sept. 6, 1892
12	Crenshaw, Arthur.....	Alabama.....	Sept. 6, 1892

R Resigned after successfully completing the four years' course.

Naval Cadets of the First Class—Line Division—57 members.

Name.	State from which appointed.	Date of admission.	Sea service in previous ships.	
			Months.	Days.
Amerson, William Christian	New York	Sept. 25, 1893	0	0
Boyd, David French, jr.	Alabama	May 19, 1893	0	25
Chase, Gilbert	Virginia	Sept. 6, 1893	5	20
Du Bose, William Gunnell	Georgia	Sept. 6, 1893	0	15
Duncan, Oscar Dibble	Alabama	Sept. 6, 1893	5	20
Eggert, Ernest Frederick	Michigan	Sept. 6, 1893	5	20
Falconer, Walter Maxwell	Ohio	Sept. 6, 1893	5	15
Giles, William Pinkney	Texas	May 20, 1893	0	27
Gracino, Joseph Wright	Pennsylvania	Sept. 6, 1893	5	20
Hart, Thomas Charles	Michigan	May 19, 1893	0	27
Henderson, Robert William	Ohio	Sept. 22, 1893	0	0
Hepburn, Arthur Japy	Pennsylvania	Sept. 22, 1893	0	0
Holman, Frederic Ralph	Iowa	May 19, 1893	0	27
Hoopce, Edward Trimble	Pennsylvania	Sept. 6, 1893	0	0
Houston, Victor Stuart	South Dakota	Sept. 22, 1893	0	15
Jones, Needham Lee	Mississippi	Sept. 6, 1893	5	20
Kautz, Austin	Washington	May 19, 1893	0	25
Kempff, Clarence Selby	California	May 19, 1893	0	27
Landis, Irwin Franklin	Kansas	Sept. 6, 1893	5	20
McCarthy, Albert Henry	Iowa	Sept. 6, 1893	0	0
McDowell, Willis	Pennsylvania	May 19, 1893	0	25
Magill, Samuel George, jr.	North Dakota	May 19, 1893	0	25
Miller, Cyrus Robinson	California	Sept. 6, 1893	5	20
Murin, Orin Gould	Ohio	Sept. 6, 1893	5	20
Overstreet, Luther Martin	Nebraska	Sept. 6, 1893	0	15
Owen, Alfred Crosby	District of Columbia	Sept. 6, 1893	5	20
Owens, Charles Truendale	Pennsylvania	Sept. 6, 1893	5	27
Perrill, Harlan Page	Indiana	Sept. 6, 1893	0	0
Powell, Joseph Wright	New York	May 19, 1893	5	25
Preney, Alfred Warren	Nebraska	May 19, 1893	0	10
Reynolds, William Herbert	Georgia	Sept. 6, 1893	0	0
Sargent, Leonard Rundlett	Minnesota	Sept. 6, 1893	5	20
Sexton, Walton Rowell	Illinois	May 19, 1893	0	27
Smith, Arthur St. Clair, jr.	Iowa	Sept. 6, 1893	5	20
Theisen, David Elias	Wisconsin	Sept. 6, 1893	5	20
White, William Russell	Arizona	Sept. 6, 1893	5	20
Williams, Hilary	Indiana	Sept. 6, 1893	0	0
Yarnell, Harry Ervin	Iowa	Sept. 6, 1893	0	0

Engineer Division—14 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
<i>s</i> Anding, Sheldon Webb	Mississippi	May 19, 1898	6	28
Collins, Henry Lafayette	Pennsylvania	Sept. 6, 1898	5	28
<i>s</i> Graham, Andrew Thomas	Illinois	Sept. 6, 1898	5	26
Jenson, Henry Norman	Wisconsin	Sept. 6, 1898	5	27
Keenan, Ernest Clinton	New York	Sept. 6, 1898	5	28
Leahy, William Daniel	Wisconsin	May 19, 1898	8	28
Mahony, Daniel Sullivan	Michigan	Sept. 6, 1898	5	28
Morse, John Wise	Massachusetts	Sept. 6, 1898	5	28
Pratt, Peter Lloyd	Illinois	May 19, 1898	8	24
Richardson, Louis Clark	South Carolina	Sept. 6, 1898	5	27
<i>s</i> Roehle, Clifton Charles	Maryland	Sept. 6, 1898	4	6
Sheffield, Fletcher Lamar	Georgia	Sept. 6, 1898	5	28
Van Orden, George	Michigan	May 19, 1898	8	26
Webber, George	Arkansas	Sept. 6, 1898	5	27

s Transferred July 8, sick, from Bancroft to Naval Hospital, Brooklyn.

s Transferred July 5 from Bancroft to Naval Hospital, Philadelphia; died July 14, 1898.

Naval Cadets of the Second Class—50 members.

Name.	State from which appointed.	Date of admission.	Served in practice ships	
			Months	Days
Abele, Clarence Arthur	Massachusetts	Sept. 6, 1904	5	15
Applewhite, Scott Carter	Indiana	May 19, 1904	9	6
Babcock, John Franklin	New York	Sept. 22, 1904	5	15
Boone, Charles	Ohio	Sept. 6, 1904	5	15
Briggs, Wilbur Gerheart	New York	Sept. 6, 1904	5	15
Briggs, Zeno Everett	Nebraska	Sept. 22, 1904	5	15
Brockway, Benjamin Little	South Carolina	Sept. 6, 1904	5	15
Brown, Josephus Jarvis	Illinois	Sept. 6, 1904	5	15
Brown, Morris Hamilton	Indiana	May 19, 1904	9	6
Constien, Edward Theodore	Pennsylvania	May 19, 1904	9	6
Cotten, Lyman Atkinson	North Carolina	Sept. 6, 1904	5	15
Cronan, William Pigott	Connecticut	Sept. 6, 1904	5	15
Dinger, Henry Charles	Wisconsin	May 19, 1904	9	6
Elson, Herman Jacob	Mississippi	May 19, 1904	9	6
Evans, Frank Taylor	At large	Sept. 6, 1904	5	15
Faller, Guy William	Wisconsin	May 19, 1904	9	6
Farrin, Thomas Benjamin, jr.	Illinois	Sept. 22, 1904	5	15
Gilmer, James Blair	Virginia	May 19, 1904	9	6
Graham, John Simon	Colorado	May 19, 1904	9	6
Halligan, John, jr.	Massachusetts	Sept. 6, 1904	5	15
Hand, James Alexander, jr.	South Dakota	Sept. 6, 1904	5	15
Hanrahan, David Carlisle	Wisconsin	May 19, 1904	9	6
Huntington, Arthur Franklin	New York	Sept. 12, 1904	5	15
Johnson, Thomas Lee	Kansas	May 19, 1904	9	6
Kress, James Chatham	Pennsylvania	Sept. 6, 1904	5	15
Love, James Monroe, jr.	Virginia	Sept. 6, 1904	5	15
McIntyre, Edward William	California	Sept. 6, 1904	5	15
Macy, Ulysses Samuel	Missouri	Sept. 6, 1904	5	15
* Madison, Zachariah Harvey	Illinois	Sept. 6, 1904	5	15
Mannix, Daniel Pratt	Ohio	Sept. 6, 1904	5	15
Marble, Ralph Norris, jr.	Minnesota	May 19, 1904	9	6
Mitchell, Alexander Neely	Ohio	Sept. 6, 1904	5	15
Nelson, Charles Preston	Massachusetts	May 19, 1904	9	6
† Peterson, Rorue Lloyd	Michigan	June 1, 1904	9	6
Pettengill, George Tilford	Idaho at large	Sept. 22, 1904	5	15
Pinney, Frank Lucius	Connecticut	Sept. 6, 1904	5	15
Roper, Walter Gordon	Georgia	Sept. 22, 1904	5	15
Rhodes, John Anderson	Missouri	Sept. 6, 1904	5	15
Shane, Louis	Nebraska	Sept. 6, 1904	5	15
Smith, George Leonard	New Hampshire	Sept. 6, 1904	5	15
Sweet, George Cook	New York	Sept. 22, 1904	5	15
Tardy, Walter Benjamin	Arkansas	May 19, 1904	9	6
Tarrant, William Theodore	Texas	Sept. 6, 1904	5	15
* Thorpe, George Cyrus	Minnesota	May 19, 1904	9	6
Watts, William Carlton	Pennsylvania	Sept. 22, 1904	5	15
Wells, William Benedict	Iowa	May 19, 1904	9	6
Williams, Henry	Maryland	Sept. 6, 1904	5	15
Williams, Yancey Sullivan	South Carolina	Sept. 6, 1904	5	15
Wonda, Edward	Massachusetts	May 19, 1904	9	6
Wright, Henry Tutwiler	Alabama	Sept. 6, 1904	5	15

* Transferred July 4 from Bancroft to Naval Hospital, Brooklyn.

† Dropped September 2, 1904

* Deficient, recommended for re-examination; sick, absent; subject to examination.

Naval Cadets of the Third Class—60 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Bailey, John Eliot	Michigan	May 20, 1895	5	15
Beckner, John Taliaferro	Kentucky	May 20, 1895	5	15
Bissell, Henry Harrison	New York	May 30, 1895	5	17
Bisset, Guy Aloysius	Kentucky	Sept. 6, 1895	2	22
Bloch, Claude Charles	Kentucky	Sept. 6, 1895	2	22
Bowers, John Treadwell	New Jersey	Sept. 6, 1895	2	22
Branch, Frank Oak	Indiana	Sept. 6, 1895	2	22
Brinser, Harry Lerch	Pennsylvania	Sept. 6, 1895	2	22
Buchanan, Allen	Indiana	Sept. 6, 1895	2	22
Buttrick, James Tyler	Rhode Island	Sept. 6, 1895	2	22
Clement, James Wilkinson Legare, jr.	South Carolina	Sept. 27, 1895	2	22
Cole, Cyrus Willard	Ohio	Sept. 6, 1895	2	22
Combs, James Rockwell	Illinois	Sept. 6, 1895	2	22
Courtney, Charles Edward	New York	May 20, 1895	5	15
Dungan, Paul Baxter	Nebraska	Sept. 6, 1895	2	22
Evans, Herbert Heard	Mississippi	Sept. 6, 1895	2	22
Fenner, Edward Blaine	New York	May 20, 1895	5	15
Fischer, Charles Hermann	Pennsylvania	Sept. 6, 1895	2	22
Forman, Charles William	Illinois	Sept. 6, 1895	2	22
Frawley, William John	Massachusetts	May 20, 1895	5	15
Gleason, Henry Miller	Kansas	May 20, 1895	5	15
Greenslade, John Wills	Ohio	May 20, 1895	5	15
Hatch, Charles Byron, jr	Illinois	Sept. 6, 1895	2	22
Helm, Frank Pinckney, jr	Kentucky	May 20, 1895	5	15
Horne, Frederick Joseph	New York	May 20, 1895	5	15
Hunt, Walter Merrill	Maine	Sept. 6, 1895	2	22
Jeffers, William Nicholson	New York	Sept. 20, 1895	2	22
Johnson, Alfred Wilkinson	At large	May 20, 1895	5	15
Kalbfus, Edward Clifford	At large	May 20, 1895	5	15
Kimberly, Victor Ashfield	Massachusetts	Sept. 6, 1895	2	22
Lackey, Henry Ellis	At large	May 20, 1895	5	15
Larimer, Edgar Brown	Kansas	Sept. 6, 1895	2	22
Lewis, John Earl	Minnesota	Sept. 6, 1895	2	22
McCarty, Sterling Hicks	Missouri	Sept. 6, 1895	2	22
Major, Samuel Ira Monger	Kentucky	Sept. 6, 1895	2	22
Mathews, James Edward	Illinois	May 20, 1895	5	15
Miller, William Siebel	Texas	Sept. 20, 1895	2	22
Morgan, Charles Elmer	West Virginia	Sept. 6, 1895	2	22
Morrison, Farmer	Arkansas	Sept. 6, 1895	2	22
† Northup, Arthur Weed	Ohio	Sept. 6, 1895	2	22
Pope, Ralph Elton	Nebraska	May 20, 1895	5	15
Royall, Hilary Herbert	Alabama	May 20, 1895	5	15
Sadler, Everit Jay	Kansas	Sept. 20, 1895	2	22
Sayles, William Randall	Rhode Island	May 20, 1895	5	15
Shackford, Chauncey	New Jersey	Sept. 6, 1895	2	22
Shapley, Lloyd Stowell	Missouri	May 30, 1895	5	15
Smith, Clyde Wilbur	Iowa	Sept. 6, 1895	2	22
Sparrow, Herbert George	Ohio	Sept. 6, 1895	2	22
Taussig, Joseph Knoefler	At large	May 30, 1895	5	15
Thomas, Samuel Brown	At large	May 30, 1895	5	15

Naval Cadets of the Third Class—60 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
s Tomb, James Harvey	Missouri	Sept. 6, 1896,	1	11
Vincent, Roe Willis	Pennsylvania	Sept. 6, 1896,	2	28
Watson, Adolphus Eugene	At large	May 20, 1896	5	15
Weichert, Ernest Augustus	Connecticut	Sept. 6, 1896	2	22
West, Arthur Stuart	Georgia	May 20, 1896,	5	25
White, Richard Drace	Missouri	May 20, 1896,	5	15
Wood, Welborn Cicero	Georgia	Sept. 6, 1896,	2	22
Woodward, Clark Howell	Georgia	Sept. 6, 1896,	2	22
Wyman, Henry Lake	Illinois	Sept. 6, 1896,	2	22
Yates, Fred Hammond	Maine	May 20, 1896,	5	26

s Transferred July 17 from Monongahela to Hospital. Funchal.

Naval Cadets of the Fourth Class—97 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Abernathy, Robert Andrew	Tennessee	Sept. 5, 1896	16	1	0	0
Arnold, Clarence Lamont	Indiana	Sept. 5, 1896	18	0	0	0
Asmus, Allston	New York	Sept. 5, 1896	16	0	0	0
Bartholow, Benjamin Grady	Ohio	Sept. 5, 1896	18	6	0	0
Berrien, Frank Dunn	Iowa	Sept. 5, 1896	19	0	0	0
Berry, Robert Lawrence	Kentucky	May 20, 1896	15	9	0	0
Blair, George Fred	Michigan	Sept. 5, 1896	16	1	0	0
Boardman, William Henry	Massachusetts	Sept. 5, 1896	19	10	0	0
Brackett, William	Illinois	Sept. 5, 1896	15	8	0	0
Bricker, William Franklin	Pennsylvania	Sept. 19, 1896	17	8	0	0
Browne, Claude	Alabama	Sept. 5, 1896	17	6	0	0
Bryant, Samuel Wood	Pennsylvania	Sept. 5, 1896	19	3	0	0
Bulmer, Bayard Taylor	Nevada, at large	Sept. 5, 1896	19	9	0	0
Caffery, John Murphy	Louisiana	Sept. 5, 1896	18	11	0	0
Cage, Harry Kimball	Texas	May 20, 1896	16	8	0	0
Case, William Stanhope	Illinois	Sept. 6, 1895	18	0	2	22
Catron, John Walz	New Mexico	Sept. 5, 1896	17	7	0	0
Church, John Gaylord	Ohio	May 20, 1896	17	1	0	0
Clark, Arthur William	California	Sept. 19, 1896	17	11	0	0
Cocke, Herbert Claiborne	Virginia	May 20, 1896	18	4	5	15
Comfort, James Hall	Missouri	May 20, 1896	19	6	0	0
Cox, Lewis Smith, jr.	Pennsylvania	May 20, 1896	16	2	0	0
Cresap, Edward Otho	Florida	May 20, 1896	18	6	5	15
Crittenden, Kirby Barnes	Missouri	Sept. 5, 1896	17	5	0	0
Day, Charles Conwell	Indiana	Sept. 5, 1896	18	8	0	0
Dearborn, Peyton Brown	Virginia	Sept. 5, 1896	16	9	0	0
Defrees, Joseph Rollie	Illinois	May 20, 1896	19	11	0	0
Dodd, Edwin Horace	Illinois	Sept. 5, 1896	17	0	0	0
Downes, John, jr.	At large	June 3, 1896	16	6	0	0
Doyle, Stafford Henry Rahall	South Carolina	May 20, 1896	20	0	2	22
Draper, Arthur Edgar	Kansas	Sept. 19, 1896	18	9	0	0
Ellis, Hayne	Georgia	Sept. 5, 1896	19	0	0	0
Enbody, Josiah Waterhouse	Pennsylvania	Sept. 5, 1896	19	9	0	0
Ferguson, William Burden, jr.	North Carolina	May 20, 1896	18	0	0	0
Fitzpatrick, John James	Louisiana	Sept. 5, 1896	16	7	0	0
Foley, Paul	New York	Sept. 5, 1896	18	3	0	0
Foots, Percy Wright	North Carolina	Sept. 5, 1896	17	0	0	0
Fowler, Orle Walter	Iowa	Sept. 5, 1896	18	1	0	0
Freeman, Charles Seymour	Pennsylvania	Sept. 5, 1896	17	9	0	0
Gannon, Sinclair	Texas	June 3, 1896	19	2	0	0
Gardiner, Carlos Alfonso	Illinois	May 20, 1896	16	7	0	0
Harris, George Simmons	Georgia	Sept. 5, 1896	15	7	0	0
Hellweg, Julius Frederick	Maryland	Sept. 5, 1896	17	5	0	0
Howard, Abram Claude	Illinois	Sept. 5, 1896	16	5	0	0
Huff, Charles Peabody	Missouri	Sept. 5, 1896	19	4	0	0
Hulick, Clive Kelsey	Ohio	Sept. 5, 1896	17	1	0	0
Hyland, John Joseph	Massachusetts	Sept. 19, 1896	18	5	0	0
Jackson, Edward Sharpless	Pennsylvania	May 22, 1896	18	3	0	0
James, John Frederick	Virginia	Sept. 5, 1896	18	6	0	0
Johnston, Huntington	Oregon	Sept. 19, 1896	18	9	0	

Naval Cadets of the Fourth Class—97 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Kear, Carleton Romig.....	Ohio.....	May 20, 1896	16	2	0	0
d Kearny, Philip.....	Missouri.....	May 20, 1896	16	4	2	20
Keating, Arthur Barnes.....	Maryland.....	Sept. 19, 1896	17	2	0	0
Landenberger, George Bertram.....	Pennsylvania.....	May 20, 1896	17	1	0	0
Landram, Clarence Elmer.....	Kentucky.....	Sept. 5, 1896	16	7	0	0
McEntee, William.....	Minnesota.....	May 20, 1896	19	0	0	0
Mann, John Ferris.....	New York.....	Sept. 5, 1896	19	4	0	0
Menner, Robert Tryon.....	Pennsylvania.....	Sept. 5, 1896	19	11	0	0
Miles, Harold Bancroft.....	Wyoming, at large.....	May 20, 1896	19	11	0	0
Miller, Benjamin Franklin.....	Virginia.....	Sept. 5, 1896	16	1	0	0
Mitchell, Willis Gemmill.....	Pennsylvania.....	Sept. 5, 1896	18	11	0	0
Morris, Robert.....	Utah, at large.....	Sept. 5, 1896	17	9	0	0
Nalle, Frederick Raymonde.....	Pennsylvania.....	Sept. 5, 1896	16	2	0	0
Noa, Loveman.....	Tennessee.....	Sept. 5, 1896	17	11	0	0
O'Reilly, Philip Maitland.....	Pennsylvania.....	June 2, 1896	16	7	0	0
Osterhaus, Hugo Wilson.....	Virginia.....	May 20, 1896	16	6	0	0
Pye, William Satterlee.....	Minnesota.....	Sept. 5, 1896	16	2	0	0
Rhea, Robert Yancey.....	Kentucky.....	May 20, 1896	16	11	0	0
Rhue, John Alonzo.....	Indiana.....	Sept. 5, 1896	19	8	0	0
Riddle, William King.....	Tennessee.....	Sept. 5, 1896	19	8	0	0
d Roberts, Charles Verner.....	New York.....	June 3, 1896	16	7	0	0
Roosevelt, Henry Latrobe.....	New York.....	July 6, 1896	16	8	0	0
Russell, Branch Elliott.....	Wisconsin.....	May 20, 1896	16	4	0	0
Schoenfeld, John William.....	New York.....	July 6, 1896	19	11	0	0
Scranton, Edison Ernest.....	Ohio.....	May 20, 1896	19	3	0	0
Shra, William Henry.....	New York.....	May 20, 1896	16	9	0	0
Sloan, James Muir, jr.....	Maryland.....	May 20, 1896	16	4	0	0
Smith, Wilbert.....	Michigan.....	July 6, 1896	19	8	0	0
Snyder, Charles Phillip.....	West Virginia.....	May 20, 1896	16	10	0	0
Spilman, John Armistead.....	Virginia.....	May 20, 1896	16	1	0	0
Steele, George Washington, jr.....	Indiana.....	June 2, 1896	16	11	0	0
Svars, Emil Pravoslav.....	Texas.....	May 20, 1896	19	1	0	0
Tamura, Hiroaki.....	Empire of Japan.....	May 25, 1896	17	5	0	0
Thompson, Scott McGhee.....	Florida.....	Sept. 5, 1896	19	7	0	0
Timmons, John Wesley.....	Ohio.....	June 2, 1896	17	10	0	0
Tumb, William Victor.....	Arkansas.....	Sept. 5, 1896	16	11	0	0
Train, Charles Russell.....	New York.....	Sept. 5, 1896	16	11	0	0
Turner, Robert Francis.....	Iowa.....	Sept. 6, 1896	19	8	2	2
Vernon, Walter Newhall.....	Oregon.....	Sept. 5, 1896	16	6	0	0
Wade, Charles Tobias.....	New Jersey.....	Sept. 5, 1896	16	11	0	0
Wainwright, John Drayton.....	Delaware, at large.....	Sept. 19, 1896	16	2	0	0
Winston, Hollis Taylor.....	North Carolina.....	Sept. 5, 1896	16	10	0	0
Wood, Robert Thompson.....	New York.....	Sept. 5, 1896	17	4	0	0
Woods, Stanley.....	Illinois.....	May 20, 1896	15	6	0	0
Wortman, Ward Kenneth.....	Montana, at large.....	Sept. 5, 1896	16	7	0	0
Wright, Luke Edward, jr.....	Tennessee.....	Sept. 5, 1896	19	3	0	0
Zigbaum, Rufus Fairchild, jr.....	New York.....	May 20, 1896	16	11	0	0

d Dismissed.

Summary of Cadets at the United States Naval Academy, October, 1896.

First class—	Members.
Line Division.....	88
Engineer Division	13
	— 51
Second class.....	49
Third class	60
Fourth class.....	95
	—
Total.....	255
5633—3	

RELATIVE STANDING OF NAVAL CADETS FOR 1895-'96.

Classes of the Naval Cadets, at the United States Naval Academy, at the close of the Academic Year 1895-'96; with the relative standing of the members in each class, as determined at the Annual Examination, June, 1896.

P Physically disqualified for the naval service.

R Resigned after successfully completing the four years' course.

***** Received 85 per cent of the multiple.

† Found deficient, allowed a reëxamination, passed, and continued with class.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

d Dismissed.

e Selected for Engineer Division.

f Deficient, continued with class.

m Deficient; recommended for reëxamination; resigned.

n Deficient; recommended for reëxamination; sick and absent.

r Resigned.

s Sick.

w Found deficient, warned.

Relative standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years.	Months.
23	Bronson, Amon, jr	Nebraska	Sept 20, 1892	19	.
12	Cluverius, Wat Tyler, jr	Louisiana	May 20, 1892	17	.
2	Craven, Thomas Tingey	New Hampshire	Sept 19, 1892	19	:
24	Curtin, Roland Irvin	Pennsylvania	Sept. 6, 1892	19	.
4	Earle, Ralph	Massachusetts	Sept. 6, 1892	19	.
22	Ellis, Mark Saint Clair	Arkansas	July 1, 1892	19	:
23	Gilpin, Charles Edward	Michigan	Sept. 6, 1892	19	.
3	Holden, Jonas Hannibal	Vermont	May 20, 1892	19	.
21	Jessop, Earl Percy	West Virginia	Sept. 6, 1892	19	.
5	Kalbach, Andrew Edwin	Pennsylvania	July 1, 1892	19	.
16	Kearney, Thomas Albert	Missouri	Sept. 6, 1892	17	.
R13	Kimball, Henry Swift	Massachusetts	Sept. 6, 1892	19	.
14	Knox, Dudley Wright	Tennessee	Sept. 6, 1892	15	:
15	MacArthur, Arthur, jr	Wisconsin	Sept. 6, 1892	19	.
19	McCauley, Edward, jr	New York	Oct. 10, 1892	17	.
25	Mustin, Henry Croakey	Tennessee	Sept. 6, 1892	19	.
17	Palmer, Leigh Carlyle	Missouri	Sept. 6, 1892	19	.
6	Poor, Charles Longstreet	New York	Sept. 6, 1892	19	.
13	Ridgely, Frank Eugene	At large	Sept. 6, 1892	17	:
*1	Robinson, Richard Hallett	Ohio	Sept. 6, 1892	17	.
20	Roy, John Halley	New York	Sept. 6, 1892	15	.
11	Toner, Charles Maxson	New York	Sept 19, 1892	16	:
10	Walker, Ralph Eric	Indiana	May 20, 1892	15	.
8	Wettengel, Ivan Cyrus	Colorado	Sept. 6, 1892	16	.
9	Wood, Duncan Mahon	Alabama	Sept 20, 1892	15	.
7	Wurtsbaugh, Daniel Wilbert	Texas	May 20, 1892	19	.

R Resigned after successfully completing the four years' course.

Line Division—26 members—Annual Examination, June, 1896.

Order of merit in—											Number of demerits.	Sea serv- ice in prac- tice ships.		Order of annual merit.
Seamanship, naval construc- tion, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied me- chanics.	Physica.	International law.	Physiology and hygiene.	Efficiency.	Conduct.		Months.	Days.	
26	26	23	26	26	17	23	22	22	20	26	96	4	22	26
8	18	15	14	16	13	7	4	8	16	8	24	10	7	12
3	6	3	9	17	3	5	5	14	1	4	16	7	15	2
20	22	25	25	19	24	21	23	17	21	23	68	7	15	24
4	8	3	2	5	8	11	3	5	18	2	10	7	15	4
23	25	19	22	14	20	30	18	3	19	19	54	8	19	22
25	10	20	17	25	25	24	26	26	11	14	39	7	15	23
2	3	5	8	8	7	6	11	10	3	3	14	10	7	3
17	20	21	23	13	26	19	14	23	16	14	39	7	15	21
6	12	10	4	6	4	8	17	1	13	8	24	8	17	5
15	1	22	19	15	11	18	7	11	6	6	18	7	15	16
13	10	13	6	24	19	16	20	21	6	7	23	7	15	13
10	22	11	15	4	21	17	16	24	10	10	26	7	7	14
14	14	7	17	11	21	12	19	9	25	18	44	7	15	15
22	7	16	16	9	17	25	21	25	6	13	34	7	15	19
21	9	25	24	23	10	26	24	20	15	25	95	7	15	25
17	16	16	12	1	15	22	9	15	5	21	62	7	15	17
7	12	9	10	6	8	4	6	12	11	11	27	7	15	6
19	17	23	21	11	16	14	13	6	4	12	29	7	15	18
1	4	1	1	2	1	1	2	7	2	1	8	7	15	*1
24	20	14	19	10	23	9	10	15	14	24	76	7	15	20
12	14	12	11	25	2	12	14	3	23	17	40	7	15	11
9	19	16	6	20	5	2	12	13	26	14	39	10	7	10
10	5	6	8	21	14	14	1	2	22	20	60	7	15	8
5	24	2	13	21	11	8	25	19	24	22	65	7	15	9
15	1	8	4	3	6	10	8	18	9	5	17	10	7	7

Relative standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission	Age at date of admission.	
				Years	Months
9	Bisset, Henry Overstreet.....	Maryland	Sept. 6, 1882	15	2
5	Burt, Charles Perry	Georgia	Sept. 6, 1882	17	2
6	Castleman, Kenneth Galleher.....	Kentucky	Sept. 6, 1882	15	3
10	Crenshaw, Arthur.....	Alabama	Sept. 6, 1882	17	6
2	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 12, 1882	17	11
12	Henry, James Buchanan, jr.....	New York.....	Sept. 6, 1882	15	6
41	Leiper, Charles Lewis.....	Pennsylvania	Sept. 6, 1882	15	6
3	Lincoln, Gatewood Sanders.....	Missouri.....	May 20, 1882	16	6
7	Littlefield, William Lord.....	Massachusetts	Sept. 20, 1882	16	6
4	Marshall, Albert Ware.....	Texas.....	Sept. 6, 1882	16	3
1	Rice, George Benjamin.....	Kentucky	Sept. 6, 1882	17	6
11	Washington, Pope.....	North Carolina	Sept. 7, 1882	15	1.

Engineer Division—12 members—Annual Examination, June, 1896.

Sea service.		Order of merit in—											Number of demerits.	Order of annual merit.
Months.	Days.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Experimental engineering.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Efficiency.	Conduct.		
7	15	6	8	6	11	10	11	4	6	6	12	7	57	9
6	4	7	3	5	4	8	7	5	2	8	5	10	88	5
4	26	8	6	7	7	6	2	9	8	8	4	9	76	6
6	4	12	12	11	9	10	9	9	11	9	9	8	72	10
6	4	2	3	8	3	4	4	8	7	1	1	1	16	2
6	4	10	11	10	12	12	9	12	12	11	11	11	105	12
6	4	1	1	1	1	1	5	1	1	4	1	1	16	* 1
8	26	8	4	2	2	5	6	2	3	7	5	6	52	8
5	26	8	7	8	6	8	2	8	5	10	7	3	38	7
6	4	5	5	4	5	2	1	6	4	2	8	4	43	4
6	4	9	10	9	8	7	8	7	9	12	8	5	51	8
6	4	11	8	12	10	9	11	11	10	5	10	12	115	11

Relative standing of the Naval Cadets of the Service

Order of annual merit	Name	State from which appointed	Date of admission
43	Anding, Sheldon Webb	Mississippi	May 19 1901
45	Amerson, William Christian	New York	Sept 22 1901
5	Bagby, Robert Coleman	Missouri	Sept 22 1901
28	Boyd, David French, jr.	Alabama	May 19 1901
5	Bryant, Samuel Wood	Pennsylvania	May 19 1901
21	Chase, Gilbert	Virginia	Sept 6 1901
41	Collins, Henry Lafayette	Pennsylvania	Sept 6 1901
5	Day, John Arthur	New York	May 19 1901
92	De Bess, William Connell	Georgia	Sept 6 1901
23	Duncan, Oscar Dibble	Alabama	Sept 6 1901
91	Egert, Ernest Frederick	Michigan	Sept 6 1901
29	Falconer, Walter Maxwell	Ohio	Sept 6 1901
25	Giles, William Pinkney	Texas	May 19 1901
27	Graeme, Joseph Wright	Pennsylvania	Sept 6 1901
45	Graham, Andrew Thomas	Illinois	Sept 6 1901
13	Hart, Thomas Charles	Michigan	May 19 1901
2	Henderson, Robert William	Ohio	Sept 22 1901
6	Hepburn, Arthur Japy	Pennsylvania	Sept 22 1901
26	Holman, Frederic Ralph	Iowa	May 19 1901
44	Hoppe, Edward Trimble	Pennsylvania	Sept 6 1901
29	Houston, Victor Stuart	South Dakota	Sept 22 1901
44	Jensen, Henry Norman	Wisconsin	Sept 6 1901
19	Jones, Needham Lee	Mississippi	Sept 6 1901
61	Kantz, Austin	Washington	May 19 1901
46	Keenan, Ernest Clinton	New York	Sept 6 1901
9	Kempff, Clarence Selby	California	May 19 1901
50	Landis, Irwin Franklin	Kansas	Sept 6 1901
45	Leahy, William Daniel	Wisconsin	May 19 1901
24	McCarthy, Albert Henry	Iowa	Sept 6 1901
31	McDowell, Willis	Pennsylvania	May 19 1901
47	Magill, Samuel George, jr.	North Dakota	May 19 1901
415	Mahony, Daniel Sullivan	Michigan	Sept 6 1901
12	Miller, Cyrus Robinson	California	Sept 6 1901
99	Moran, John Wier	Massachusetts	Sept 6 1901
14	Murfin, Orin Gould	Ohio	Sept 6 1901
16	Oversweet, Luther Martin	Nebraska	Sept 6 1901
49	Owen, Alfred Crosby	District of Columbia	Sept 6 1901
22	Owens, Charles Truvelain	Pennsylvania	Sept 6 1901
94	Parrill, Maria Page	Indiana	Sept 6 1901
93	Powell, Joseph Wright	New York	May 19 1901
479	Pratt, Peter Lloyd	Illinois	May 19 1901
9	Prosser, Alfred Warren	Nebraska	May 19 1901
21	Reynolds, William Herbert	Georgia	Sept 6 1901
	Richardson, Louis Clark	South Carolina	Sept 6 1901
	Reble, Clifton Charles	Maryland	Sept 6 1901

Class—56 members—Annual Examination, June, 1896.

Age at date of admission.		Order of merit in—											Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	History.	Efficiency.	Conduct.		
19	6	41	55	43	53	49	40	53	29	48	37	9	18	43
18	0	39	52	45	39	45	46	45	10	31	37	42	98	45
16	11	55	46	55	50	53	54	14	49	18	48	28	62	6
16	8	4	19	22	45	18	26	25	10	20	28	49	141	26
15	11	39	49	50	31	54	53	39	45	49	53	47	127	5
19	11	15	26	29	19	18	15	9	9	26	37	21	43	31
16	9	21	9	10	17	5	11	35	35	41	8	43	101	11
17	8	49	54	54	56	45	55	3	41	26	51	54	202	5
16	11	1	1	5	34	2	2	2	26	1	1	1	4	22
19	1	46	29	29	26	28	21	48	20	53	42	45	114	33
17	3	5	2	1	16	1	1	3	1	3	14	5	12	21
17	8	6	22	20	53	28	20	27	30	35	24	55	213	39
18	1	31	47	44	6	45	47	55	25	51	17	2	11	36
18	0	26	33	33	30	51	22	20	14	2	21	30	64	27
19	0	36	18	22	33	22	33	54	39	31	24	13	32	25
15	11	12	14	7	19	23	9	35	23	7	37	17	39	13
16	5	27	33	48	51	40	27	25	40	24	34	27	58	37
15	11	2	8	9	26	7	4	7	28	4	8	32	65	6
19	2	37	9	38	13	27	35	34	17	12	28	26	53	26
17	9	50	51	49	24	30	44	42	35	53	8	35	81	44
17	2	24	43	29	38	45	40	1	6	33	7	23	49	29
17	7	35	44	41	17	43	40	39	32	39	21	10	22	34
18	9	21	21	14	22	30	16	3	30	16	17	13	32	19
19	8	37	42	47	37	36	45	24	42	35	24	22	45	40
17	8	52	39	52	49	50	48	46	55	48	54	33	71	49
18	11	30	50	51	35	55	51	43	44	49	44	28	61	2
18	2	53	30	32	52	42	39	48	51	55	48	45	132	50
18	0	24	27	25	21	33	30	22	48	51	50	44	103	35
17	8	8	31	42	5	33	33	48	19	33	2	5	12	24
18	3	11	25	40	42	35	27	37	51	45	24	19	41	31
17	9	48	31	36	41	37	27	47	21	47	47	53	196	47
19	8	23	12	11	43	11	13	19	49	19	46	39	67	15
18	11	28	17	16	35	9	3	8	13	14	25	50	147	12
18	3	31	53	37	14	52	52	12	47	30	17	23	49	2
17	4	19	36	16	10	20	19	23	15	13	17	2	11	18
19	10	9	36	19	11	24	13	35	3	22	4	16	33	16
18	0	51	47	46	43	37	43	39	14	35	34	52	153	46
15	3	44	16	25	40	30	25	30	53	22	51	40	59	22
18	9	7	3	7	22	3	5	15	35	8	12	30	64	24
16	13	3	4	3	6	4	6	16	8	6	2	8	14	23
18	5	34	40	34	8	37	37	31	23	15	25	45	125	35
19	11	28	7	12	4	6	7	13	16	42	23	33	71	8
19	4	14	9	14	1	17	24	21	10	17	5	41	94	20
18	10	33	40	21	12	16	22	51	34	42	42	2	11	2
16	0	18	29	2	28	19	22	25	5	29	14	19	42	

Relative standing of the Naval Cadets of the Second Class—

Order of annual merit.	Name.	State from which appointed		Date of admission.
17	Sargent, Leonard Rundlett.....	Minnesota		Sept 6 '92
28	Sexton, Walton Roswell	Illinois.....		May 19 '92
10	Sheffield, Fletcher Lamar.....	Georgia		Sept 6 '92
41	Smith, Arthur St. Clair, jr.....	Iowa		Sept 6 '92
57	Terry, Joseph Dandridge.....	Virginia		May 19 '92
7	Theleen, David Elias	Wisconsin		Sept 6 '92
46	Van Orden, George.....	Michigan		May 19 '92
42	Webber, George	Arkansas		Sept 6 '92
9	White, William Russell.....	Arizona.....		Sept 6 '92
30	Williams, Hilary	Indiana		Sept 6 '92
5	Yarnall, Harry Ervin	Iowa		Sept 6 '92

56 members—Annual Examination, June, 1896—Continued.

Age at date of admission.		Order of merit in—											Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	History.	Efficiency.	Conduct.		
17	1	15	6	27	55	15	12	6	53	5	44	11	26	17
16	8	17	23	32	47	20	31	31	27	24	34	36	81	28
17	6	13	14	16	28	12	16	18	21	10	8	5	12	e10
19	8	44	33	34	31	40	50	51	46	37	28	18	40	41
19	3				15									a r
17	10	19	13	6	2	14	9	31	4	28	14	12	31	7
15	1	54	27	24	47	25	38	45	42	44	55	51	174	e46
16	4	41	38	38	45	44	48	29	32	11	28	35	76	e42
17	3	41	23	13	3	7	16	11	2	20	37	25	52	9
18	3	46	44	28	9	26	35	17	38	40	6	36	82	30
17	10	10	4	4	24	10	7	10	7	9	12	13	32	*5

Relative standing of the Naval Cadets of the Third

Order of annual merit.	Name.	State from which appointed.	Date of admission.
21	Abele, Clarence Arthur	Massachusetts	Sept. 6, 1894
40	Applewhite, Scott Carter	Indiana	May 19, 1894
5	Arnold, William Wood	New Jersey	May 19, 1894
42	Babcock, John Franklin	New York	Sept. 22, 1894
13	Boone, Charles	Ohio	Sept. 6, 1894
9	Briggs, Wilbur Gerheart	New York	Sept. 6, 1894
10	Briggs, Zeno Everett	Nebraska	Sept. 22, 1894
1	Brockway, Benjamin Little	South Carolina	Sept. 6, 1894
18	Brown, Josephus Jarvis	Illinois	Sept. 6, 1894
34	Brown, Morris Hamilton	Indiana	May 19, 1894
26	Constien, Edward Theodore	Pennsylvania	May 19, 1894
19	Cotten, Lyman Atkinson	North Carolina	Sept. 6, 1894
25	Cronan, William Pigott	Connecticut	Sept. 6, 1894
30	Dinger, Henry Charles	Wisconsin	May 19, 1894
6	Elson, Herman Jacob	Mississippi	May 19, 1894
29	Evans, Franck Taylor	At large	Sept. 6, 1894
22	Faller, Guy William	Wisconsin	May 19, 1894
28	Farrin, Thomas Benjamin, jr	Illinois	Sept. 22, 1894
1	Gilmer, James Blair	Virginia	May 19, 1894
1	Graham, John Simon	Colorado	May 19, 1894
41	Halligan, John, jr	Massachusetts	Sept. 6, 1894
7	Hand, James Alexander, jr	South Dakota	Sept. 6, 1894
1	Hanrahan, David Carlisle	Wisconsin	May 19, 1894
9	Hord, Oliver Saunders	Kentucky	May 19, 1894
9	Hunter, Charles Milton	Ohio	May 19, 1894
41	Huntington, Arthur Franklin	New York	Sept. 12, 1894
30	Johnson, Thomas Lee	Kansas	May 19, 1894
48	Kress, James Chatham	Pennsylvania	Sept. 6, 1894
9	Lehfelddt, Henry August	Wisconsin	May 19, 1894
27	Love, James Monroe, jr	Virginia	Sept. 6, 1894
11	McIntyre, Edward William	California	Sept. 6, 1894
24	Mary, Ulysses Samuel	Missouri	Sept. 6, 1894
13	Madison, Zachariah Harvey	Illinois	Sept. 6, 1894
15	Mannix, Daniel Pratt	Ohio	Sept. 6, 1894
15	Marble, Ralph Norris, jr	Minnesota	May 19, 1894
14	Mitchell, Alexander Neely	Ohio	Sept. 6, 1894
28	Nelson, Charles Preston	Massachusetts	May 19, 1894
9	Peterson, Romeo Lloyd	Michigan	June 1, 1894
23	Pettengill, George Tilford	Idaho, at large	Sept. 22, 1894
12	Pinney, Frank Lucius	Connecticut	Sept. 6, 1894
29	Roper, Walter Gordon	Georgia	Sept. 22, 1894
27	Schofield, John Anderson	Missouri	Sept. 6, 1894
17	Shane, Louis	Nebraska	Sept. 6, 1894

Class—55 members—Annual Examination, June, 1896.

Age at date of admission.		Order of merit in—							Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.		
17	10	16	17	28	28	30	39	7	57	21
18	4	40	46	46	29	49	47	45	170	40
17	7	53	51	42	43	35	14	25	91	5
15	0	37	39	51	52	50	34	51	203	42
17	11	5	32	22	11	28	14	4	48	13
18	7	8	5	11	15	25	19	2	33	9
17	11	13	19	17	26	4	13	5	51	10
18	9	51	42	47	49	37	47	25	92	†
16	7	11	22	12	9	39	42	14	68	18
17	6	45	37	28	18	39	5	36	114	34
18	6	26	23	43	36	28	39	1	30	26
19	8	23	12	12	34	13	21	10	61	19
15	7	39	31	21	14	15	19	31	106	25
18	2	9	12	20	20	30	29	33	109	20
18	4	15	11	10	8	4	2	7	57	6
18	11	43	43	43	12	45	34	34	110	36
16	1	18	34	38	34	14	38	10	61	22
17	7	47	48	31	23	27	52	21	86	M
18	2	38	53	30	49	37	31	31	107	†
19	1	47	39	23	43	47	26	30	104	†
18	3	3	2	2	2	16	7	9	58	*1
18	11	11	8	2	5	17	12	21	87	7
18	9	21	50	53	51	39	26	37	120	†
18	3	54	54	50	55	46	44	43	161	5
19	8	44	52	52	54	55	54	54	231	5
17	6	45	39	40	38	52	46	46	173	41
19	1	34	25	25	37	21	29	39	135	30
17	3	42	44	49	45	51	52	52	211	43
18	5	55	55	35	24	44	42	49	193	5
19	6	33	24	33	26	29	18	16	74	27
17	6	7	9	4	17	32	7	20	85	11
17	8	21	10	24	29	11	26	49	194	24
17	8	35	38	55	46	7	44	39	135	33
16	0	40	49	15	20	53	39	18	76	35
15	2	9	20	27	38	8	14	13	66	15
18	11	18	27	25	22	1	21	29	100	16
17	3	35	47	48	40	18	7	44	168	36
17	10	50	12	16	16	19	1	42	150	5
16	10	24	21	6	7	24	25	55	243	23
19	9	17	16	36	25	2	11	17	75	13
18	11	26	44	54	52	33	31	53	219	39
18	6	32	29	45	41	48	50	23	88	37
17	4	18	12	19	8	20	54	41	139	17

Relative standing of the Naval Cadets of the Third Class—

Order of annual merit.	Name.	State from which appointed	Date of admission.
• 3	Smith, George Leonard	New Hampshire	Sept. 6, 1894
29	Sweet, George Cook	New York	Sept. 22, 1894
31	Tardy, Walter Benjamin	Arkansas	May 19, 1894
14	Tarrant, William Theodore	Texas	Sept. 6, 1894
9	Taylor, Hugh Kirkpatrick	Ohio	Sept. 22, 1894
•	Thorpe, George Cyrus	Minnesota	May 19, 1894
5	Watts, William Carleton	Pennsylvania	Sept. 22, 1894
32	Wells, William Benefiel	Iowa	May 19, 1894
• 4	Williams, Henry	Maryland	Sept. 6, 1894
28	Williams, Yancey Sullivan	South Carolina	Sept. 6, 1894
8	Woods, Edward	Massachusetts	May 19, 1894
• 2	Wright, Henry Tutwiler	Alabama	Sept. 6, 1894

55 members—Annual Examination, June, 1896—Continued.

Age at date of admission.										
Years.	Months.									
18	0	2	3	14	12	3	6	19	78	*2
17	3	29	29	33	32	12	34	46	176	29
18	11	29	18	7	46	54	14	35	111	31
18	1	25	22	8	6	21	23	5	52	14
19	7	52	35	32	41	42	31	23	89	9
19	4	49	36	36	49	35	47	38	133	2
18	8	4	4	5	4	10	10	47	175	5
17	4	39	26	39	32	43	50	28	94	32
17	0	1	1	17	19	6	23	15	72	*4
18	4	28	32	40	29	34	34	10	61	23
18	6	14	7	9	9	9	4	25	91	8
19	8	5	6	1	1	23	3	2	38	*2

Relative standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed	Date of admission
16	Bailey, John Elliot.....	Michigan	May 20, 1902
29	Beckner, John Taliaferro	Kentucky.....	May 20, 1902
18	Bissell, Henry Harrison	New York	May 20, 1902
* 2	Bisset, Guy Aloysius	Kentucky.....	Sept. 6, 1902
17	Bloch, Claude Charles	Kentucky.....	Sept. 6, 1902
9	Bowers, John Treadwell	New Jersey	Sept. 6, 1902
56	Branch, Frank Oak	Indiana	Sept. 6, 1902
42	Brinsar, Harry Lerch.....	Pennsylvania.....	Sept. 6, 1902
* 3	Buchanan, Allen	Indiana	Sept. 6, 1902
51	Buttrick, James Tyler.....	Rhode Island	Sept. 6, 1902
45	Case, William Stanhope	Illinois	Sept. 6, 1902
13	Clement, James Wilkinson Legare, jr	South Carolina	Sept. 27, 1902
24	Cole, Cyrus Willard.....	Ohio.....	Sept. 6, 1902
54	Combs, James Rockwell	Illinois	Sept. 6, 1902
20	Courtney, Charles Edward	New York	May 20, 1902
25	Dungan, Paul Baxter	Nebraska	Sept. 6, 1902
†	Evans, Herbert Heard.....	Mississippi.....	Sept. 6, 1902
* 4	Fesser, Edward Blaine	New York	May 20, 1902
53	Fischer, Charles Hermann	Pennsylvania	Sept. 6, 1902
50	Forman, Charles William.....	Illinois	Sept. 6, 1902
44	Frawley, William John.....	Massachusetts.....	May 20, 1902
* 6	Gleason, Henry Miller	Kansas	May 20, 1902
41	Greenalade, John Wills.....	Ohio	May 20, 1902
55	Hatch, Charles Byron, jr	Illinois	Sept. 6, 1902
†	Helm, Frank Pinckney, jr	Kentucky.....	May 20, 1902
28	Horne, Frederick Joseph.....	New York	May 20, 1902
47	Hunt, Walter Merrill.....	Maine	Sept. 6, 1902
* 5	Jeffers, William Nicholas	New York	Sept. 27, 1902
27	Johnson, Alfred Wilkinson	At large.....	May 20, 1902
24	Kalbua, Edward Clifford	At large	May 20, 1902
8	Kimberly, Victor Ashfield	Massachusetts	Sept. 6, 1902
23	Lackey, Henry Ellis	At large	May 20, 1902
26	Larimer, Edgar Brown	Kansas.....	Sept. 6, 1902
27	Lewis, John Earl	Minnesota	Sept. 6, 1902
43	McCarthy, Sterling Hicks.....	Missouri	Sept. 6, 1902
22	Major, Samuel Ira Monger	Kentucky	Sept. 6, 1902
45	Mathews, James Edward	Illinois	May 20, 1902
16	Miller, William Rebel	Texas	Sept. 20, 1902
30	Morgan, Charles Elmer	West Virginia	Sept. 6, 1902
25	Morrison, Farmer	Arkansas	Sept. 6, 1902
6	Muir, John Church	California	Sept. 6, 1902
†	Northup Arthur Weed	Ohio.....	Sept. 6, 1902
29	Pope, Ralph Elton.....	Nebraska	May 20, 1902
* 1	Royall, Hilary Herbert	Alabama	May 20, 1902

Class—65 members—Annual Examination, June, 1896.

Age at date of admission.		Order of merit in—					Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.		
17	10	8	13	31	29	48	105	15
16	8	3	87	44	36	60	164	29
19	3	50	15	2	5	57	137	18
18	1	1	2	3	26	17	51	*2
17	2	17	22	17	61	25	60	17
18	5	7	41	8	7	22	56	9
17	4	38	60	60	60	59	152	56
18	9	30	40	47	31	49	106	42
18	9	4	4	9	1	10	42	*3
19	11	57	47	48	14	25	61	51
13	1	(a)	(a)	(a)	(a)			a * 1
17	1	49	8	10	56	2	17	13
19	3	19	32	25	36	13	46	24
19	1	54	45	52	62	54	122	54
17	11	38	7	24	6	45	89	20
18	2	23	16	29	11	42	87	25
15	5	59	28	46	50	31	68	†
18	9	9	3	7	14	22	56	*4
19	11	44	59	58	31	6	33	53
18	11	26	49	55	62	54	123	50
18	9	52	54	20	31	47	94	44
18	7	11	6	6	2	17	50	*6
15	4	32	38	54	31	17	51	41
17	1	42	48	55	56	63	214	55
18	2	61	54	58	26	62	203	†
15	3	35	28	16	51	35	81	26
18	11	50	51	43	41	11	45	47
18	6	10	9	1	3	53	118	*5
18	6	46	42	23	23	38	82	38
17	6	27	25	30	13	46	92	34
17	10	6	26	11	7	35	80	8
18	11	40	43	5	36	21	54	23
19	1	46	22	42	29	6	32	36
17	2	14	35	55	36	14	48	37
19	8	56	34	40	51	34	78	43
18	0	42	10	20	41	30	64	22
19	4	33	60	31	41	33	76	45
18	9	19	12	12	47	58	149	16
18	7	27	35	25	48	8	37	30
19	7	38	28	36	36	25	60	35
16	5	59	62	62	51	56	124	§
17	1	58	57	50	19	51	116	†
19	4	48	38	52	14	38	82	49
18	9	5	27	22	11	42	87	11

Relative standing of the Naval Cadets of the Fourth Class—

Order of annual merit.	Name.	State from which appointed	Date
			admission
14	Sadler, Everit Jay	Kansas.....	Sept 20 1897
19	Sayles, William Randall	Rhode Island	May 21 1897
52	Shackford, Chauncey	New Jersey	Sept. 6 1897
46	Shapley, Lloyd Stowell.....	Missouri	May 21 1897
†	Smith, Clyde Wilbur	Iowa	Sept. 6 1897
• 1	Sparrow, Herbert George.....	Ohio.....	Sept. 6 1897
23	Tausig, Joseph Knefler	At large.....	May 20 1897
47	Thomas, Samuel Brown	At large.	May 21 1897
31	Tomb, James Harvey	Missouri	Sept. 6 1897
a s *	Turner, Robert Francis	Iowa	Sept. 6 1897
21	Vincent, Roe Willis	Pennsylvania.....	Sept 6 1897
40	Watson, Adolphus Eugene	At large	May 21 1897
7	Welchert, Ernest Augustus	Connecticut	Sept. 6 1897
39	West, Arthur Stuart	Georgia	May 21 1897
12	White, Richard Drace	Missouri	May 21 1897
5	Wood, Robert Thompson.....	New York	May 20 1897
10	Wood, Welborn Cicero	Georgia	Sept. 6 1897
27	Woodward, Clark Howell.....	Georgia	Sept 6 1897
6	Wright, Luke Edward.....	Tennessee	May 20 1897
22	Wyman, Henry Lake	Illinois	Sept. 6 1897
24	Yates, Fred Hammond.....	Maine	May 20 1897

65 members—Annual Examination, June, 1896—Continued.

Age at date of admission.		Order of merit in—					Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.		
16	4	16	19	14	51	40	84	14
17	5	23	11	40	14	1	10	19
18	5	45	54	61	19	3	20	52
19	6	29	52	49	45	29	63	46
16	10	54	63	62	51	50	108	*
18	1	2	1	3	19	4	23	*1
17	9	25	22	39	4	25	60	33
17	4	33	50	51	19	24	59	47
19	0	18	28	34	7	42	87	31
19	8	(a)	(a)	(a)	(a)	.....	.....	a s 7
18	4	21	17	27	48	35	80	21
16	9	40	52	33	41	14	49	40
17	11	15	5	13	10	20	53	7
16	2	30	45	37	23	40	85	39
18	1	12	14	18	31	32	74	12
16	0	62	57	44	56	53	120	5
19	8	21	17	15	23	4	22	10
18	6	36	21	28	26	9	39	27
17	11	63	44	35	14	61	171	5
16	9	52	20	13	45	14	49	32
16	4	13	33	38	56	11	44	28

APPOINTMENTS, RESIGNATIONS, DISMISSALS, DEATHS.

OCTOBER 3, 1895, TO OCTOBER 3, 1896.

Appointed Ensigns July 1, 1896.

Naval Cadet Gillis, Irvin Van Gorder.....	Class of	1896
Naval Cadet McLean, Ridley.....	Class of	1896
Naval Cadet Stone, Raymond.....	Class of	1896
Naval Cadet Sellers, David Foote.....	Class of	1896
Naval Cadet Webster, Charles.....	Class of	1896
Naval Cadet Tompkins, John Thomas.....	Class of	1896
Naval Cadet Babin, Provoost.....	Class of	1896
Naval Cadet Fullinwider, Simon Peter.....	Class of	1896
Naval Cadet Jones, Lewis Burton.....	Class of	1896
Naval Cadet Graham, Stephen Victor.....	Class of	1896
Naval Cadet Bennett, Ernest Linwood.....	Class of	1896
Naval Cadet Sandoz, Fritz Louis.....	Class of	1896
Naval Cadet Luby, John McClane.....	Class of	1896
Naval Cadet Scott, William Pitt.....	Class of	1896
Naval Cadet Kavanagh, Arthur Glynn.....	Class of	1896
Naval Cadet Snow, Carlton Farwell.....	Class of	1896
Naval Cadet Bookwalter, Charles Sumner.....	Class of	1896
Naval Cadet Bulmer, Roscoe Carlyle.....	Class of	1896
Naval Cadet Galbraith, Gilbert Smith.....	Class of	1896
Naval Cadet Spear, Roscoe.....	Class of	1896
Naval Cadet McNeely, Robert Whitehead.....	Class of	1896
Naval Cadet Turpin, Walter Stevens.....	Class of	1896
Naval Cadet Stone, George Loring Porter.....	Class of	1896
Naval Cadet Whitted, William Scott.....	Class of	1896
Naval Cadet Osborn, Robert Hatfield.....	Class of	1896
Naval Cadet Manion, Walter James.....	Class of	1896
Naval Cadet Gelm, George Earl.....	Class of	1896
Naval Cadet England, Clarence.....	Class of	1896

Appointed Assistant Engineers July 1, 1896.

Naval Cadet Hudgins, John Milton.....	Class of	1896
Naval Cadet McMorris, Boling Kavanaugh.....	Class of	1896
Naval Cadet Hinds, Alfred Walton.....	Class of	1896
Naval Cadet Moody, Roscoe Charles.....	Class of	1896
Naval Cadet James, Leland Frierson.....	Class of	1896
Naval Cadet Chappell, Ralph Hubert.....	Class of	1896
Naval Cadet Reeves, Joseph Mason.....	Class of	1896
Naval Cadet Cooper, Ignatius Taylor.....	Class of	1896

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS. 53

Naval Cadet Baker, Henry Thomas.....	Class of 1894
Naval Cadet Lyon, Frank.....	Class of 1894
Naval Cadet Cone, Hutch Ingham.....	Class of 1894
Naval Cadet Winship, Emory.....	Class of 1894
Naval Cadet De Lany, Edwin Hayden.....	Class of 1894

Appointed Assistant Naval Constructors July 1, 1896.

Naval Cadet Robert, William Pierre.....	Class of 1894
Naval Cadet Cox, Daniel Hargate.....	Class of 1894
Naval Cadet Roberts, Thomas Gaines.....	Class of 1894
Naval Cadet Adams, Lawrence Stowell.....	Class of 1894

Appointed Second Lieutenant United States Marine Corps July 1, 1896.

Naval Cadet Shaw, Melville Jones.....	Class of 1894
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Resigned.

Naval Cadet Churchill, Winston, class appointed 1890 (omitted from previous register).....	Sept. 11, 1894
Naval Cadet Rutledge, Carl C., third class.....	Oct. 29, 1895
Naval Cadet Brown, George, jr., third class.....	Nov. 20, 1895
Naval Cadet Horn, Frank J., fourth class.....	Dec. 18, 1895
Naval Cadet Wells, Daniel H., jr., fourth class.....	Jan. 6, 1896
Naval Cadet Vernon, Walter N., fourth class.....	Jan. 22, 1896
Naval Cadet Bird, Owen S., fourth class.....	Jan. 24, 1896
Naval Cadet Parrish, John W. C., fourth class.....	Jan. 31, 1896
Naval Cadet Bowman, Everett N., fourth class.....	Feb. 8, 1896
Naval Cadet Conger, William H., fourth class.....	Feb. 8, 1896
Naval Cadet Hilleary, John F., second class.....	Feb. 10, 1896
Naval Cadet Naylor, Charles J., second class.....	Feb. 10, 1896
Naval Cadet England, William H., third class.....	Feb. 10, 1896
Naval Cadet Cashman, Frank P., fourth class.....	Feb. 10, 1896
Naval Cadet Cocke, Herbert C., fourth class.....	Feb. 10, 1896
Naval Cadet Craighead, Walter B., fourth class.....	Feb. 10, 1896
Naval Cadet Cresap, Edward O., fourth class.....	Feb. 10, 1896
Naval Cadet Cull, Julius E., fourth class.....	Feb. 10, 1896
Naval Cadet Doyle, Stafford H. R., fourth class.....	Feb. 10, 1896
Naval Cadet Ferguson, Garland S., fourth class.....	Feb. 10, 1896
Naval Cadet Gillett, Ransom H., fourth class.....	Feb. 10, 1896
Naval Cadet Irwin, Algernon C., fourth class.....	Feb. 10, 1896
Naval Cadet Kearny, Philip, fourth class.....	Feb. 10, 1896
Naval Cadet Maguire, Charles L., fourth class.....	Feb. 10, 1896
Naval Cadet Morris, Thomas J., fourth class.....	Feb. 10, 1896
Naval Cadet Savidge, Albert C., fourth class.....	Feb. 10, 1896
Naval Cadet Schmidt, Oscar, fourth class.....	Feb. 10, 1896
Naval Cadet Asserson, Frederick A., fourth class.....	Feb. 24, 1896
Naval Cadet Montgomery, Russell, fourth class.....	May 1, 1896
Naval Cadet Hord, Oliver S., third class.....	June 7, 1896
Naval Cadet Wood, Robert T., fourth class.....	June 7, 1896
Naval Cadet Kimball, Henry S., first class.....	June 8, 1896
Naval Cadet Bagby, Robert C., second class.....	June 8, 1896
Naval Cadet Bryant, Samuel W., second class.....	June 8, 1896
Naval Cadet Lehfeldt, Henry A., third class.....	June 8, 1896
Naval Cadet Muir, John C., fourth class.....	June 8, 1896
Naval Cadet Wright, Luke E., fourth class.....	June 8, 1896

54 APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

Naval Cadet Day, John A., second class	June 10, 1945.
Naval Cadet Arnold, William W., third class.....	June 10, 1945.
Naval Cadet Hunter, Charles Milton, third class.....	June 11, 1945.
Naval Cadet Taylor, Hugh K., third class	June 11, 1945.
Naval Cadet Terry, Joseph D., second class.....	July 29, 1945.
Naval Cadet Farrin, Thomas B., jr., second class.	Sept. 30, 1945.

Dismissed.

Naval Cadet Osterhout, Frank M., fourth class.....	Dec. 14, 1945.
Naval Cadet Wessels, Arthur L., second class.....	Apr. 8, 1946.
Naval Cadet Kearny, Philip, fourth class.....	Aug. 26, 1946.
Naval Cadet Roberts, Charles V., fourth class.....	Sept. 30, 1946.

Deaths.

Naval Cadet Purse, Henry A., third class.....	Apr. 9, 1945.
Naval Cadet Roehle, Clifton C., first class.....	July 14, 1945.

Dropped.

Naval Cadet Peterson, Roscoe L., second class.....	Sept. 2, 1946.
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MERIT ROLLS FOR 1895-'96.

Merit rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 99, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit roll, the final standing for the course is determined by the sum of the yearly marks.

“Cadets who attain 85 per cent of the multiple in any year shall be distinguished by a star affixed to their names on the merit rolls.” (Regulations United States Naval Academy, par. 191.)

The diplomas of cadets whose final marks on the graduating merit roll are not less than 85 per cent of the maximum read, “passed with distinction;” those whose final marks are between 74 per cent and 85 per cent of the maximum read, “passed with credit;” and those whose final marks are between 62½ per cent and 74 per cent of the maximum read, “passed.”

P Physically disqualified for the naval service.

R Resigned after successfully completing the four years' course.

* Received 85 per cent of the multiple.

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

d Dismissed.

e Selected for Engineer Division.

m Deficient; recommended for reëxamination; resigned.

n Deficient; recommended for reëxamination; sick and absent.

s Sick.

w Found deficient, warned.

Merit roll of the Graduating Class of Naval Cadets—Line Division—at the conclusion of the Six Years' Course, June, 1896.

Name.	Maxima.										Assignment.	
	Seamanship and naval construction.	(Ordnance and gun battery.	Navigation and surveying.	Steam machinery, engines, and boilers.	International law.	French, Spanish, and (German.	(True reports.	Navigation note book, journals, and station bills.	Aggregate for final examination.	Aggregate for four years.		Final aggregate.
1 Irvin Van C. Collins	44 12	34 33	34 30	16 35	14 14	21 70	16 00	6.05	204.24	670.65	874.80	Ensign.
2 Ridley McLean	47 14	37 14	40 70	16 45	19 04	21 49	15 30	7.74	207.24	640.40	847.04	Ensign.
3 Raymond Stone	49 14	26 05	32 45	15 40	19 04	27 24	15 30	7.35	203.79	640.60	844.44	Ensign.
4 David F. Bellere	47 14	34 17	30 01	16 75	14 24	22 05	15 04	4.80	195.25	646.85	842.10	Ensign.
5 Charles Webster	44 20	26 45	30 52	14 10	19 34	23 53	15 04	6.05	202.44	639.60	842.04	Ensign.
6 John T. Tompkins	45 04	37 40	30 25	14 45	15 05	19 46	15 00	4.00	181.10	640.41	821.51	Ensign.
7 Provost Balan	45 04	30 40	24 24	16 00	12 12	19 44	14 32	6.34	171.04	625.90	797.93	Ensign.
8 Simon P. Fullinwider	40 32	37 14	33 44	14 05	16 02	21 77	15 52	7.46	191.05	604.40	795.55	Ensign.
9 L. Burton Jones	40 50	34 47	31 04	14 00	16 04	21 35	14 24	6.00	185.02	607.50	792.52	Ensign.
10 Stephen V. Graham	42 24	33 05	34 10	15 40	14 24	22 40	14 40	6.46	184.23	593.00	781.20	Ensign.
11 Ernest L. Bennett	45 02	22 34	24 40	16 25	14 05	23 17	15 24	6.40	183.02	590.54	774.30	Ensign.
12 Fritz L. Hachler	40 14	22 34	27 24	13 45	19 04	24 05	13 00	6.04	181.00	584.25	761.14	Ensign.
13 John McV. Luby	43 40	22 12	25 30	13 05	17 40	24 30	15 22	5.50	174.00	585.01	762.01	Ensign.
14 William P. Brett	45 04	23 05	24 42	14 75	17 40	20 70	14 05	7.34	183.44	570.42	754.26	Ensign.
15 Arthur G. Kavanagh	45 00	20 40	30 14	16 05	15 14	23 00	14 44	7.00	191.41	571.70	753.57	Ensign.
16 Carlton F. Row	46 04	20 40	23 05	13 44	14 34	21 44	14 22	7.14	177.71	570.14	747.40	Ensign.
17 Charles H. Rockwaller	44 04	34 22	26 14	14 30	14 34	21 07	14 32	5.34	174.53	570.57	745.10	Ensign.
18 Melville J. Shaw	37 14	30 40	24 31	11 40	16 02	21 49	12 57	6.14	164.34	577.25	741.61	Second Lieutenant, U. S. M. C.
19 Maurice C. Palmer	41 54	25 53	21 71	14 75	15 34	21 02	11 77	7.35	140.00	540.00	741.04	Ensign.
20 Clifford A. Colburn	42 14	20 30	25 10	12 30	7 44	20 44	15 77	5.54	134.86	541.46	740.02	Ensign.

21	Roscoe Spear	38.02	20.81	20.48	15.75	17.52	21.21	13.04	7.20	172.00	504.18	737.17	Ensign.
22	Robert W. McNelly	43.62	34.05	26.84	10.55	11.28	10.07	13.04	0.20	172.00	502.01	735.30	Ensign.
23	Walter H. Turpin	41.80	34.10	30.00	10.25	11.04	10.80	13.12	8.00	173.15	501.30	734.51	Ensign.
24	George L. P. Stone	40.04	33.06	22.84	14.05	17.40	10.50	14.40	7.14	104.00	507.58	735.00	Ensign.
25	William M. Whitted	40.40	33.00	20.15	10.15	8.70	17.04	14.00	7.04	104.24	500.70	735.00	Ensign.
26	Robert H. Chaborn	34.72	28.00	22.22	12.55	10.00	10.04	13.02	0.40	152.15	500.01	731.10	Ensign.
27	Walter J. Manton	38.50	27.00	21.07	14.15	15.12	21.28	12.40	8.00	152.00	500.00	710.20	Ensign.
28	George K. John	37.52	27.72	20.54	17.00	10.14	20.30	10.02	0.14	100.00	501.01	712.44	Ensign
29	Clarence England	30.02	20.37	24.50	15.20	13.04	21.07	10.04	0.14	100.75	500.10	712.01	Ensign.

Note. Naval Cadets William P. Robert, Daniel H. Cox, Thomas C. Roberts, and Lawrence M. Adams, pursuing special studies abroad, did not appear at the final graduating examination.

MERIT ROLL—GRADUATING CLASS.

Name.	Final aggregate.										Assignment.
	Naval construction.	Marine engines.	Dredging machinery.	Boilers.	French, Spanish, and German.	(True reports.	Journals and station bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.	
	32	72	36	40	28	16	16	240	760	1,000	
1 John M. Hudgins	24.16	36.52	32.04	28.50	20.09	15.12	14.12	190.55	627.90	818.45	Assistant Engineer.
2 Elling K. McMorris	24.96	56.52	31.59	29.40	21.14	14.00	13.32	190.93	601.26	792.19	Assistant Engineer.
3 Alfred W. Hinde	26.04	51.30	31.96	28.20	20.23	14.80	15.00	187.13	594.14	775.27	Assistant Engineer.
4 Romeo C. Morley	20.80	54.07	23.04	32.20	19.25	14.44	15.48	180.26	594.02	768.27	Assistant Engineer.
5 Leland F. James	23.60	53.24	29.52	28.20	20.09	15.40	14.40	185.19	574.71	763.90	Assistant Engineer.
6 Ralph H. Chappell	26.00	54.24	22.05	30.00	19.20	15.04	13.48	182.20	579.26	761.56	Assistant Engineer.
7 Joseph M. Reeves	26.40	58.80	27.54	31.70	21.28	13.76	14.76	194.20	561.93	756.23	Assistant Engineer.
8 Lematus T. Cooper	23.84	67.70	26.64	25.00	19.25	15.60	9.08	167.71	640.65	748.76	Assistant Engineer.
9 Henry T. Baker	20.96	49.50	26.19	27.00	19.53	14.16	10.44	167.74	579.85	747.68	Assistant Engineer.
10 Frank Lyon	23.92	55.80	26.26	27.20	19.86	14.12	14.80	182.70	562.14	745.84	Assistant Engineer.
11 Hutch I. Cone	25.12	53.26	27.18	20.60	17.99	15.60	12.44	183.21	559.21	742.42	Assistant Engineer.
12 Emory Winship	27.44	55.80	28.01	29.10	20.72	14.44	11.12	184.67	533.41	734.08	Assistant Engineer.
13 Edwin H. De Lany	21.26	48.76	25.65	25.10	17.92	14.96	13.04	194.93	511.57	690.40	Assistant Engineer.

Merit roll for the four years ending June, 1896, of the Naval Cadets of the class appointed in 1891, now performing required service afloat—Line Division—members.

Rank and position in class.	Name.	Appointed for	Appointed for	Appointed for	Appointed for	Appointed for
		1st year.	2nd year.	3rd year.	4th year.	5th year.
1	2	3	4	5	6	7
1	Stuart F. Smith.....	71.46	182.18	182.19	182.19	62.14
2	William C. Greenstock.....	72.44	182.14	182.14	182.14	62.14
3	Frank H. Remmby.....	74.70	182.12	182.12	182.12	62.14
4	Frank P. Baldwin.....	74.71	182.12	182.12	182.12	62.14
5	William C. Davidson.....	75.10	182.14	182.14	182.14	62.14
6	Harris Lanning.....	75.13	182.14	182.14	182.14	62.14
7	Philip M. Hanson.....	75.16	182.14	182.14	182.14	62.14
8	Arthur C. Chester.....	75.18	182.14	182.14	182.14	62.14
9	John H. Monaghan.....	75.18	182.14	182.14	182.14	62.14
10	Samuel V. Butler, Jr.....	75.19	182.14	182.14	182.14	62.14
11	James H. Walker.....	75.19	182.14	182.14	182.14	62.14
12	William H. Robinson.....	75.19	182.14	182.14	182.14	62.14
13	David W. Todd.....	75.19	182.14	182.14	182.14	62.14
14	James J. Baty.....	75.19	182.14	182.14	182.14	62.14
15	William H. Stanley.....	75.19	182.14	182.14	182.14	62.14
16	Walker R. (Harvard).....	75.19	182.14	182.14	182.14	62.14
17	John V. Hicomm.....	75.19	182.14	182.14	182.14	62.14
18	Kenneth M. Bennett.....	75.19	182.14	182.14	182.14	62.14
19	Michael J. McCormack.....	75.19	182.14	182.14	182.14	62.14
20	Worth Bagley.....	75.19	182.14	182.14	182.14	62.14
21	Alison J. Washburn.....	75.19	182.14	182.14	182.14	62.14
22	Samuel H. Barnes.....	75.19	182.14	182.14	182.14	62.14
23	Edward H. Watson.....	75.19	182.14	182.14	182.14	62.14
24	Joseph C. Breckinridge.....	75.19	182.14	182.14	182.14	62.14
25	Orin S. Knapp.....	75.19	182.14	182.14	182.14	62.14
26	Newt H. Hall.....	75.19	182.14	182.14	182.14	62.14
27	Rufus Z. Johnston, Jr.....	75.19	182.14	182.14	182.14	62.14

Note.—Cadet Stuart F. Smith pursuing special course of study abroad.

Merit roll for the four years ending June, 1895, of the Naval Cadets of the class appointed in 1891, now performing required service afloat—Engineer Division—12 members.

Order of general merit for four years.	Name.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	(General aggregate for four years)
	Maxima	76	152	228	304	760
1	Thomas M. Dick	68.50	129.25	185.75	262.00	645.50
2	Charles K. Mallory	55.21	118.75	164.15	250.71	588.82
3	Newton Mansfield	59.42	123.75	179.24	266.16	628.57
4	Daniel M. Garrison	53.93	112.80	177.45	260.56	584.74
5	Franklin D. Karns	56.23	116.85	176.57	261.77	581.42
6	James P. Morton	62.03	121.95	165.61	252.25	581.84
7	Frederick K. Freeman	53.73	107.77	163.14	262.22	586.86
8	Charles H. Walker	54.47	109.85	167.03	251.60	583.95
9	John F. Marshall, jr	56.93	112.43	156.93	252.71	579.00
10	Darwin R. Merritt	52.07	105.77	157.55	254.22	569.59
11	Edward H. Dunn	56.90	103.25	157.50	214.24	527.89
12	Ernest F. Eckhardt	53.55	104.24	161.11	260.95	579.85

Merit roll for the four years ending June, 1896, of the Naval Cadets of the class appointed in 1892, now performing required service afloat—Line Division—26 members.

Order of general merit for four years.	Name.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
*1	Richard H. Robinson	71.06	138.08	203.13	272.81	685.08
2	Jonas H. Holden	62.89	126.95	190.83	255.32	635.99
3	Thomas T. Craven	66.07	125.74	187.30	255.82	634.93
4	Charles L. Poor	69.53	127.13	184.82	247.82	629.30
5	Ralph Earle	67.57	126.36	181.32	253.49	628.74
6	Andrew E. Kalbach	60.46	121.18	183.22	249.69	614.55
7	Ralph E. Walker	59.03	126.25	186.93	240.04	612.25
8	Daniel W. Wurtsbaugh	60.66	115.51	180.13	247.10	603.40
9	Ivan C. Wettengel	59.42	118.11	176.25	244.38	598.16
10	Charles M. Tozer	62.70	116.04	178.39	240.03	597.16
11	Wat T. Cluverius, jr	62.65	120.72	170.28	239.86	593.51
R 12	Henry S. Kimball	61.79	118.14	173.54	238.75	592.22
13	Duncan M. Wood	60.85	113.07	176.85	240.54	591.31
14	Leigh C. Palmer	66.28	119.79	168.54	233.39	587.96
15	Thomas A. Kearney	61.24	114.25	172.62	234.22	582.33
16	Arthur MacArthur, jr	61.90	114.48	167.83	235.25	579.46
17	Frank E. Ridgely	62.82	115.77	167.96	231.73	578.28
18	Dudley W. Knox	57.49	114.04	167.47	238.08	577.08
19	Charles E. Gilpin	62.98	120.44	165.73	221.76	570.91
20	Mark St. C. Ellis	59.36	114.85	169.79	223.13	566.63
21	Edward McCauley, jr	60.59	112.33	163.17	228.32	564.41
22	Earl P. Jessop	57.29	110.55	165.79	224.93	558.56
23	John H. Roys	54.28	110.71	156.53	225.72	547.24
24	Henry C. Mustin	53.52	110.94	161.19	217.66	543.31
25	Roland I. Curtin	54.18	108.06	158.02	218.08	538.34
26	Amon Bronson, jr	56.23	100.26	152.16	209.55	518.20

R Resigned after successfully completing the four years' course.

Merit roll for the four years ending June, 1896, of the Naval Cadets of the class appointed in 1892, now performing required service afloat—Engineer Division—12 members.

Order of general merit for four years.	Name.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General average for four years.
	Maxima.....	76	152	228	304	76
1	Charles L. Leiper.....	88.15	128.00	190.40	288.00	81.14
2	Gatewood S. Lincoln.....	85.84	123.21	182.88	281.25	80.79
3	Edward T. Fitzgerald.....	59.45	117.00	178.98	262.24	77.42
4	Henry O. Blaset.....	85.30	125.67	177.00	283.98	80.74
5	Albert W. Marshall.....	55.84	112.34	169.78	264.57	75.88
6	Charles P. Burt.....	55.57	109.67	165.93	262.23	74.85
7	Kenneth G. Castleman.....	55.82	109.79	163.29	264.47	75.84
8	William L. Littlefield.....	58.55	107.98	161.90	252.04	72.62
9	Pope Washington.....	60.79	106.31	159.21	255.98	74.32
10	George B. Rice.....	62.31	109.04	153.24	258.82	74.35
11	James B. Henry, jr.....	61.27	103.80	154.24	212.95	72.82
12	Arthur Crenshaw.....	54.25	103.52	157.08	217.68	71.38

MERIT ROLL—FIRST CLASS.

Order of annual merit.	Name.	Seamanship, naval construction, and naval tactics.												Aggregate.											
		Seamanship, practice cruise.		Ordnance and gunnery.		Navigation and surveying.		Navigation, practice cruise.		Least squares and trigonometry.		Physics.		International law.		Physiology and hygiene.		Efficiency.		Conduct.					
		52	8	60	48	8	20	20	20	16	8	32	32	32	32	32	32	32	32	32	32				
*1	Maxima																								
	Richard H. Robinson	45.37	6.76	53.70	42.96	7.68	18.05	17.55	14.30	6.14	29.04	31.36	272.81												
2	Thomas T. Craven	43.94	6.56	49.50	37.63	7.02	16.10	15.90	13.30	5.84	29.36	30.72	255.82												
3	Jonas H. Holden	44.98	6.86	48.90	37.22	7.36	15.10	15.80	12.48	6.08	28.96	30.88	255.32												
4	Ralph Earle	43.42	6.40	49.50	39.48	7.42	14.40	14.65	14.16	6.30	29.56	31.20	253.49												
5	Andrew E. Kalbach	42.64	6.34	46.95	38.16	7.40	15.80	16.30	11.80	6.78	27.44	30.08	249.69												
6	Charles L. Poor	42.25	6.34	47.40	37.56	7.40	14.40	16.15	12.84	6.04	27.60	29.84	247.82												
7	Daniel W. Wurtsbaugh	39.65	6.90	48.09	38.16	7.66	15.15	14.70	12.68	5.64	27.22	30.64	247.10												
8	Ivan C. Wettengel	41.21	6.64	48.75	38.28	6.88	13.95	14.45	14.32	6.70	28.00	27.20	244.38												
9	Duncan M. Wood	43.16	5.92	50.10	36.12	6.88	14.10	15.10	11.08	5.60	25.68	26.80	240.54												
10	Ralph E. Walker	41.34	6.12	42.90	38.04	6.90	15.55	16.65	12.44	6.02	25.20	28.88	240.04												
11	Charles M. Tozer	40.95	6.30	45.45	36.84	6.52	16.30	14.55	12.12	6.36	25.84	28.80	240.08												
12	Wat T. Cluverius, jr.	41.60	6.14	43.05	35.64	7.12	14.00	15.55	13.68	6.12	26.88	30.08	239.86												
13	Henry S. Kimball	40.58	6.36	43.65	38.04	6.74	13.50	14.40	11.60	5.50	28.24	30.16	238.75												
14	Dudley W. Knox	41.21	5.94	46.20	36.16	7.50	12.95	14.20	11.82	5.32	27.68	30.00	238.08												
15	Arthur MacArthur, jr.	39.91	6.30	48.30	34.08	7.26	12.95	14.55	11.72	6.10	25.60	28.48	235.25												
16	Thomas A. Kearney	39.65	6.90	41.25	33.48	7.16	14.10	14.10	12.72	6.06	28.24	30.56	234.22												
17	Leigh C. Palmer	39.39	6.28	42.90	36.24	7.76	13.90	13.10	12.60	5.70	28.48	27.04	233.99												
18	Frank E. Bidgely	39.13	6.18	40.95	33.12	7.26	13.60	14.45	12.36	6.28	28.72	29.68	231.73												
19	Edward McCauley, jr.	37.05	6.50	42.90	34.20	7.34	13.55	12.60	11.44	5.22	28.24	29.28	228.32												
20	John H. Roys	36.66	5.96	43.35	33.48	7.23	12.65	14.80	12.53	5.70	27.36	25.92	225.72												
21	Earl P. Jessop	39.39	5.96	41.40	32.52	7.24	11.65	13.55	12.12	5.34	26.88	23.88	224.93												

Merit roll of the Naval Cadets of the First Class—Engineer Division—12 members—Annual Examination, June, 1896.

Order of annual merit.	Name.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Experimental engineering.	Gun and steam engine work in practical engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Efficiency.	Conduct.	Aggregate.
		33	48	40	33	30	20	20	20	8	33	33	304
*1	Charles L. Leiper.....	27.60	42.12	35.70	23.24	17.85	17.65	16.95	17.60	5.78	28.88	20.72	239.09
2	Edward T. Fitzgerald.....	26.64	38.76	33.60	25.60	16.60	17.70	14.65	14.55	6.14	28.88	30.72	253.84
3	Gatewood S. Lincoln.....	25.44	37.92	33.90	23.40	16.40	17.50	16.05	15.90	5.60	28.40	27.84	251.35
4	Albert W. Marshall.....	24.72	36.24	31.60	24.56	17.60	18.00	13.60	15.15	6.04	28.80	23.56	244.87
5	Charles P. Burt.....	24.08	38.64	31.00	25.20	16.95	17.30	13.75	16.05	6.00	28.40	24.96	242.33
6	Kenneth G. Castleman.....	25.44	35.04	29.90	22.40	16.20	17.90	12.95	14.50	5.42	28.72	26.00	234.47
7	William L. Littlefield.....	23.68	33.72	29.30	22.56	15.55	17.90	13.00	14.95	5.26	28.16	23.96	233.04
8	George B. Rice.....	22.80	31.80	28.80	22.24	15.80	17.25	13.05	14.00	5.18	27.68	27.92	229.52
9	Henry O. Bisset.....	24.40	32.16	30.10	21.52	14.50	16.30	14.15	14.70	5.62	25.04	27.44	225.93
10	Arthur Crenshaw.....	21.68	30.72	27.30	21.92	14.50	16.55	12.95	12.60	5.40	27.60	26.24	217.45
11	Pope Washington.....	21.92	32.16	27.20	21.76	14.80	16.30	12.65	13.35	5.76	27.28	22.80	215.93
12	James B. Henry, jr.....	22.08	31.82	27.50	21.12	14.10	16.55	12.50	12.50	5.20	26.48	23.60	212.95

Merit roll of the Naval Cadets of the Second Class—66 members—Annual Examination, June, 1896.

MERIT ROLL—SECOND CLASS.

Order of annual merit.	Name.	Seamanship.		Astronomy.	Steam machinery, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	History.	Efficiency.	Conduct.	Aggregate.
		12	13											
	Maxima	12	13		22	8	48	40	8	12	8	20	28	228
• 1	Ernest F. Egbert	10.32	11.10		29.28	6.24	45.28	37.00	7.04	11.49	7.20	17.00	27.37	209.50
• 2	William G. De Bess	10.77	11.16		27.44	6.00	42.60	35.10	7.25	9.54	7.44	17.65	27.79	202.97
• 3	Joseph W. Powell	10.62	10.59		25.08	6.86	41.38	23.30	6.48	10.62	7.02	17.75	27.09	199.69
• 4	Marion P. Perrill	10.20	10.77		27.12	6.22	42.45	23.70	6.50	9.00	6.85	17.05	24.64	194.56
• 5	Marry E. Yarnell	10.08	10.59		27.53	6.30	39.38	23.90	6.68	10.77	6.86	17.05	26.22	194.27
• 6	Arthur J. Hepburn	10.65	10.29		26.86	6.18	39.84	24.10	6.76	9.45	7.12	17.10	24.57	192.94
• 7	David E. Theisen	9.26	9.66		27.25	7.14	38.60	23.50	5.98	11.01	5.98	17.00	26.39	189.14
• 8	Alfred W. Pressney	8.91	10.47		25.84	7.10	40.06	23.90	6.62	10.25	5.56	16.75	24.29	188.75
• 9	William B. White	8.40	9.20		25.76	7.12	39.84	31.00	6.66	11.43	6.26	16.50	25.27	187.54
• 10	Fletcher L. Sheffield	9.69	9.51		25.04	6.14	37.56	31.00	6.44	9.72	6.82	17.10	27.37	186.69
• 11	Henry L. Collins	9.35	10.02		26.56	6.32	40.46	22.00	5.88	9.00	5.60	17.10	22.68	185.17
• 12	Cyrus E. Miller	8.91	9.69		25.04	5.94	36.72	24.40	6.74	10.44	6.42	16.65	20.30	184.25
• 13	Thomas C. Hart	9.78	9.51		27.12	6.26	36.72	23.50	5.88	9.69	6.92	16.50	25.97	184.17
• 14	Clifton C. Boehle	9.39	9.45		26.72	6.14	34.56	23.90	6.04	10.66	5.96	16.65	25.98	182.92
• 15	Daniel B. Mahoney	9.20	9.66		26.40	5.69	39.34	31.20	6.42	7.74	6.30	16.30	22.45	182.02
• 16	Luther M. Overstreet	10.05	8.67		24.98	6.56	32.36	31.20	5.62	11.04	6.20	17.20	26.25	181.41
• 17	Leonard R. Bargent	9.51	10.56		31.22	4.68	38.66	21.60	6.20	7.66	7.06	16.40	26.67	180.66
• 18	Orin G. Martin	9.26	8.67		25.04	6.60	36.66	29.90	6.18	10.66	6.48	16.90	27.44	180.66
• 19	Needham L. Jones	9.20	9.42		25.60	6.22	32.76	21.00	7.04	9.24	6.26	16.90	26.22	180.19
• 20	William H. Reynolds	9.60	10.08		26.60	7.26	26.04	29.70	6.26	10.20	6.24	17.25	22.10	179.69
• 21	Alfred Chase	9.51	9.08		22.27	6.26	34.66	21.10	6.70	10.26	6.04	16.20	25.76	179.41
• 22	Louis C. Richardson	8.67	8.44		24.08	6.14	25.66	27.20	5.88	9.06	5.84	16.45	27.44	175.29
• 23	David P. Bayol, Jr	10.01	9.11		24.00	5.26	28.77	29.70	6.08	10.20	6.26	16.95	29.26	174.69

24	Albert H. McCarthy.....	10.17	8.79	22.08	6.92	32.04	27.40	5.90	9.93	5.86	17.75	27.37	174.51
25	Andrew T. Graham.....	8.58	9.06	24.00	6.02	33.84	27.40	5.50	8.88	5.88	16.70	26.32	172.78
26	Frederic R. Holman.....	8.55	10.02	22.40	6.48	33.00	27.30	5.90	10.14	6.52	16.65	25.20	172.16
27	Joseph W. Graeme.....	8.97	8.76	23.04	6.06	30.12	28.90	6.40	10.35	7.34	16.85	24.64	171.45
28	Walton E. Sexton.....	9.48	9.80	23.12	5.54	33.96	27.70	5.92	9.48	6.18	16.55	23.78	170.96
29	Victor S. Houston.....	9.27	8.87	23.20	5.90	30.48	28.60	7.78	10.83	5.86	17.15	25.41	170.85
30	Hilary Williams.....	8.28	8.84	23.44	6.72	33.12	27.30	6.46	8.91	5.62	17.20	23.73	169.12
31	Willis McDowell.....	9.99	9.21	22.24	5.72	32.16	28.10	5.86	7.71	5.50	16.70	25.83	169.02
32	Charles T. Owens.....	8.34	9.72	23.60	5.80	32.76	28.40	5.94	7.68	6.20	15.95	23.88	167.77
33	Oscar D. Duncan.....	8.28	8.91	23.20	6.18	32.88	29.10	5.60	9.87	5.24	16.45	22.05	167.76
34	Henry N. Jenson.....	8.61	8.84	22.16	6.32	30.72	28.60	5.80	9.09	5.64	16.85	23.88	167.01
35	William D. Leahy.....	9.27	9.00	23.68	6.26	32.64	28.00	8.22	7.80	5.28	16.15	22.61	166.89
36	William P. Giles.....	8.79	8.22	21.68	6.86	30.48	25.90	5.44	9.60	5.26	16.90	27.44	166.57
37	Robert W. Henderson.....	8.94	8.76	21.20	5.28	30.96	28.10	6.06	8.79	6.18	16.55	24.99	165.83
38	Peter L. Pratt.....	8.64	8.46	22.64	6.74	31.44	27.20	5.92	9.69	6.38	16.65	21.42	165.18
39	Walter M. Falconer.....	10.23	9.39	24.80	5.00	32.88	29.80	6.06	9.24	5.80	16.70	14.91	164.81
40	Austin Kautz.....	8.55	8.43	21.28	5.92	31.68	26.20	6.10	8.49	5.80	16.70	25.62	164.77
41	Arthur St. C. Smith, jr.....	8.34	8.76	22.64	6.06	30.96	25.50	5.58	8.04	5.78	16.65	25.90	164.21
42	George Webber.....	8.40	8.61	22.40	5.58	30.60	25.70	5.98	9.09	6.78	16.65	24.01	163.80
43	Sheldon W. Anding.....	8.40	7.56	21.76	5.00	30.36	26.60	5.56	9.30	5.48	16.50	27.02	163.54
44	Edward T. Hoopes.....	8.13	8.01	21.12	6.20	32.76	26.40	5.78	9.00	5.24	17.10	23.73	163.47
45	William C. Asserson.....	8.43	7.89	21.52	5.68	30.48	26.10	5.72	10.50	5.88	16.50	22.89	161.79
46	George Van Orden.....	7.77	9.00	23.84	5.54	33.24	27.00	5.74	8.49	5.52	15.50	18.90	160.54
47	Samuel G. Magill, jr.....	8.19	8.79	22.56	5.78	31.44	28.10	5.62	9.72	5.46	16.25	17.64	159.55
48	Alfred C. Owen.....	8.10	8.22	21.36	5.68	31.44	26.50	5.80	10.05	5.72	16.55	18.41	157.83
49	Ernest C. Keenan.....	8.04	8.52	20.16	5.46	30.24	25.70	5.66	7.53	5.86	15.65	24.29	156.63
50	Irwin P. Landis.....	8.01	8.85	20.16	5.26	30.84	26.70	5.60	7.71	5.22	16.20	21.07	155.62
+	John W. Morse.....	8.79	7.68	22.48	6.42	29.40	25.00	6.64	7.95	5.94	16.90	25.41	162.61
+	Clarence S. Kempff.....	8.82	8.04	20.40	5.96	28.32	25.10	5.74	8.10	5.80	16.40	24.78	156.96
§	Robert C. Bagby.....	7.62	8.28	19.60	5.38	29.04	24.60	6.58	7.74	6.32	16.20	24.78	156.14
§	Samuel W. Bryant.....	8.43	8.13	20.64	6.06	28.92	24.80	5.80	8.07	5.30	15.70	21.85	153.20
§	John A. Day.....	8.16	7.59	19.68	4.54	30.48	23.30	7.04	8.58	6.08	15.95	17.43	148.83
ar	Joseph D. Terry.....	(a)	(a)	(a)	6.40	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)

ar Resigned.

Merit roll of the Naval Cadets of the Third Class—55 members—Annual Examination, June, 1896.

Order of annual merit.	Name.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
		40	16	20	20	24	12	20	140
*1	John Halligan, Jr.	33.80	14.40	17.80	19.10	19.92	10.05	18.25	122.62
*2	Henry T. Wright	32.80	12.96	18.45	20.00	18.78	10.26	18.85	122.19
*3	George L. Smith	34.80	12.68	16.00	15.70	22.24	10.09	17.65	122.26
*4	Henry Williams	36.20	15.00	15.20	15.00	21.84	9.78	17.65	121.67
5	William C. Watts	33.40	13.28	17.50	18.70	20.76	10.02	16.75	120.61
6	Herman J. Elson	31.20	12.68	16.65	16.05	22.28	10.22	18.25	121.27
7	James A. Hand, Jr.	31.60	12.84	17.90	17.50	19.80	9.98	17.65	121.60
8	Edward Woods	31.80	12.88	16.75	15.90	20.82	10.20	17.25	121.17
9	Wilbur G. Briggs	32.00	12.12	16.10	15.45	18.68	9.84	19.00	120.17
10	Zeno E. Briggs	31.40	12.08	15.20	14.05	22.22	9.98	18.45	120.63
11	Edward W. McIntyre	32.50	12.76	17.60	15.25	17.56	10.05	17.45	122.29
12	Frank L. Pinney	29.60	12.48	14.20	14.15	22.46	9.99	17.75	121.13
13	Charles Boone	32.80	11.08	14.80	15.85	18.64	9.90	18.25	121.17
14	William T. Tarrant	27.70	11.80	16.80	17.25	19.08	9.78	18.45	120.98
15	Ralph N. Marble, Jr.	31.70	12.00	14.55	12.70	20.88	9.90	18.00	120.73
16	Alexander N. Mitchell	29.20	11.22	14.65	14.75	22.58	9.81	17.65	120.61
17	Louis Shane	29.20	12.60	15.10	19.00	19.14	9.12	15.65	120.11
18	Josephus J. Brown	31.60	11.80	16.05	15.90	17.18	9.54	17.65	120.00
19	Lyman A. Cotten	24.00	12.60	16.05	12.85	20.18	9.81	18.15	119.68
20	Henry C. Dinger	31.70	12.80	15.00	14.95	17.22	9.69	18.25	119.11
21	Clarence A. Abele	29.70	12.35	14.50	14.00	17.82	9.57	18.25	118.25
22	Guy W. Paller	29.20	10.72	14.05	12.85	20.04	9.60	18.15	115.71
23	George T. Pettengill	27.80	11.96	17.00	18.65	18.72	9.75	12.70	116.54
24	Clydes S. Macy	26.50	12.72	14.70	12.95	20.64	9.72	14.20	116.63
25	William P. Cronan	25.80	11.12	14.95	15.50	19.96	9.54	18.80	112.29
26	Edward T. Constien	27.60	11.28	12.75	12.80	18.18	9.57	19.10	111.28
27	James M. Love, Jr.	26.80	11.76	14.20	14.05	18.12	9.57	17.80	112.10
28	Yancey S. Williams	27.10	11.08	12.95	12.95	17.40	9.68	18.15	111.28
29	George C. Sweet	27.00	11.20	14.20	12.90	20.24	9.68	16.70	111.17
30	Thomas L. Johnson	26.20	11.68	14.65	12.75	19.08	9.69	12.95	111.00
31	Walter B. Tardy	27.00	12.20	16.90	12.25	15.08	9.90	18.65	110.28
32	William B. Wells	27.00	11.64	14.00	12.80	18.88	9.23	17.20	109.20
33	Zachariah H. Madison	26.10	10.60	12.75	12.25	21.20	9.46	15.65	109.63
34	Morris H. Brown	25.60	10.64	14.50	15.05	17.16	10.14	18.60	109.69
35	Daniel P. Mannix	25.70	10.04	15.55	14.95	15.24	9.57	17.70	108.75
36	Charles P. Nelson	26.10	10.12	12.40	12.65	12.69	10.05	14.65	107.65
37	John A. Schofield	26.90	11.20	12.65	12.55	15.98	9.23	17.25	107.76
38	Frank T. Evans	25.20	10.44	12.75	15.70	18.20	9.68	16.70	107.62
39	Walter G. Roger	27.60	10.28	12.80	12.65	17.46	9.66	12.65	106.16
40	Wrest C. Applewhite	25.70	10.28	12.60	12.95	15.90	9.23	14.90	106.17
41	Arthur P. Huntington	25.00	10.36	12.95	12.70	15.46	9.42	14.80	105.91
42	John F. Babcock	26.00	10.56	12.10	12.65	15.78	9.68	12.90	105.13
43	James C. Kress	25.60	10.28	12.25	12.20	15.72	9.27	12.65	104.28
44	Rueve L. Peterson	24.20	12.60	15.25	15.40	19.28	10.41	15.80	112.67
45	Thomas B. Farrin, Jr.	24.80	10.08	14.60	14.60	12.28	9.27	17.60	106.61

Merit roll of the Naval Cadets of the Third Class—55 members— Annual Examination, June, 1896—Continued.

Order of annual merit.	Name.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
	Maxima	40	16	20	20	24	12	20	152
†	David C. Hanrahan	28.50	9.92	12.90	12.90	17.16	9.72	16.40	107.50
†	James B. Gilmer	25.90	9.52	14.45	12.95	17.28	9.66	16.80	106.56
§	Hugh K. Taylor	23.90	10.68	14.35	13.55	16.86	9.66	17.35	106.35
†	John S. Graham	24.80	10.56	14.75	13.35	16.02	9.72	16.90	106.10
n	George C. Thorpe	24.60	10.68	14.20	13.00	17.34	9.39	16.00	105.21
§	William W. Arnold	23.60	9.76	13.80	13.35	17.34	9.90	17.25	105.00
†	Benjamin L. Brockway	24.10	10.48	13.45	12.95	17.28	9.39	17.25	104.90
§	Henry A. Lehfelddt	22.80	9.12	14.25	14.25	16.68	9.54	14.20	100.84
§	Oliver S. Hord	23.20	9.28	13.15	12.10	16.88	9.48	15.15	98.74
§	Charles M. Hunter	25.10	9.56	13.00	12.75	15.00	9.12	13.05	97.58

Merit roll of the Naval Cadets of the Fourth Class—65 members—Annual Examination, June, 1896.

Order of annual merit.	Name.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.	Aggregate.
		20	20	20	4	12	56
*1	Herbert G. Sparrow	18.05	18.40	18.25	2.28	11.67	60.3
*2	Gay A. Bisnet	18.05	18.20	18.25	2.28	11.33	60.0
*3	Allen Buchanan	17.50	17.00	17.45	2.51	11.27	59.0
*4	Edward B. Fenner	16.25	18.05	17.00	2.29	11.15	58.25
*5	William N. Jeffers	16.00	16.85	19.70	2.44	10.23	58.22
*6	Henry N. Gleason	15.85	17.25	17.85	2.44	11.15	58.0
7	Ernest A. Welchert	15.40	17.45	17.15	2.22	11.17	57.1
8	Victor A. Kimberly	17.00	15.40	17.30	3.23	10.20	56.0
9	John T. Bowers	16.95	14.50	17.55	2.22	11.14	55.5
10	Welburn C. Wood	14.95	16.15	16.70	2.27	11.07	55.0
11	Hilary H. Royall	17.30	15.25	16.00	3.21	10.71	54.5
12	Richard D. White	15.00	16.25	16.15	3.24	10.40	54.0
13	James W. L. Clement	13.05	16.90	17.25	2.16	11.72	53.5
14	Everit J. Sadler	15.85	15.90	16.75	3.17	10.74	53.0
15	John E. Bailey	16.75	16.40	15.00	2.25	10.44	52.4
16	William S. Miller	15.00	16.45	17.20	2.20	9.72	52.0
17	Claude C. Bloch	15.30	15.00	16.25	2.12	11.10	51.9
18	Henry H. Bissell	12.90	16.30	15.75	2.28	9.97	51.5
19	William R. Sayles	14.90	16.50	14.50	2.29	11.45	51.4
20	Charles F. Courtney	13.95	17.00	15.55	2.24	10.49	50.5
21	Roe W. Vincent	14.95	16.15	15.00	2.19	10.40	50.0
22	Samuel I. M. Major	13.50	16.05	16.05	2.22	11.04	50.0
23	Henry E. Lackey	13.70	14.40	17.90	2.28	11.19	50.0
24	Cyrus W. Cole	15.00	15.20	15.30	2.22	11.31	49.5
25	Paul B. Dungan	14.90	16.20	15.10	2.31	10.71	49.0
26	Frederick J. Horne, jr	14.00	15.30	16.50	2.17	10.41	48.5
27	Clark H. Woodward, jr	13.95	15.75	15.30	2.28	11.43	48.0
28	Fred H. Yates	15.50	15.05	14.00	2.16	11.24	47.5
29	John T. Beckner	17.95	14.70	14.10	2.23	9.74	47.0
30	Charles E. Morgan	14.50	14.80	15.80	2.19	11.09	46.5
31	James H. Tomb	13.25	15.30	16.85	2.32	10.71	46.4
32	Henry L. Wyman	12.85	15.85	16.15	2.21	11.25	46.2
33	Joseph K. Tausig	14.70	15.00	14.55	2.25	11.10	45.5
34	Edward C. Kalbfus	14.50	15.50	15.05	2.20	10.02	45.5
35	Farmer Morrison	12.85	15.20	14.70	2.21	11.10	45.0
36	Edgar B. Larimer	12.30	15.00	14.45	2.25	11.22	44.5
37	John E. Lewis	13.45	14.80	12.20	2.23	11.29	44.0
38	Alfred W. Johnson	13.30	14.45	15.70	2.27	10.77	43.0
39	Arthur S. West	14.15	14.30	14.05	2.27	10.74	42.5
40	Adolphus E. Watson	13.70	12.45	14.90	2.22	11.25	42.5
41	John W. Greenalade	14.10	14.00	12.25	2.24	11.25	42.4
42	Harry L. Brinner	14.15	14.25	14.00	2.24	10.41	41.5
43	Sterling H. McCarty	12.05	15.00	14.30	2.17	10.43	41.3
44	William J. Frawley	12.85	12.15	16.05	2.24	10.20	41.0
45	James E. Mathews	14.05	12.55	15.00	2.22	10.48	40.0

Merit roll of the Naval Cadets of the Fourth Class—65 members—Annual Examination, June, 1896—Continued.

Order of annual merit.	Name.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.	Aggregate.
	Maxima.....	20	20	20	4	12	76
46	Lloyd S. Shapley.....	14.25	13.45	13.60	3.21	11.07	55.58
47	Walter M. Hunt.....	12.90	13.70	14.40	3.22	11.84	55.56
48	Samuel B. Thomas.....	14.05	13.75	13.35	3.28	11.13	55.56
49	Ralph E. Pope.....	13.15	14.60	13.30	3.29	10.77	55.11
50	Charles W. Forman.....	14.65	13.90	13.20	3.11	10.17	55.03
51	James T. Buttrick.....	12.50	14.10	13.85	3.29	11.10	54.84
52	Chauncey Shackford.....	13.35	13.15	12.80	3.28	11.70	54.28
53	Charles H. Fischer.....	13.40	12.85	13.10	3.24	11.52	54.11
54	James R. Combs.....	12.80	14.30	13.30	3.11	10.17	53.68
55	Charles B. Hatch.....	13.50	13.95	13.20	3.16	8.79	52.60
56	Frank O. Branch.....	13.85	12.55	12.85	3.14	9.72	52.11
†	Herbert H. Evans.....	12.10	15.30	14.05	3.18	10.98	55.61
§	Luke E. Wright.....	11.30	14.35	14.75	3.29	9.45	53.14
‡	Arthur W. Northup.....	12.25	13.10	13.55	3.28	10.26	52.44
§	Robert T. Wood.....	11.65	13.10	14.10	3.16	10.20	52.21
†	Clyde W. Smith.....	12.80	12.00	12.60	3.17	10.38	50.95
†	Frank P. Helm, jr.....	12.00	13.15	13.10	3.26	8.97	50.48
§	John C. Muir.....	12.10	12.05	12.60	3.17	10.14	50.06
as†	William S. Case.....						
as‡	Robert F. Turner.....						

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.) *Provided, however,* That there shall not be at any time more in said Academy appointed at large than ten.—(*Act of Congress approved August 5, 1882.*)

III. The course of naval cadets is six years.—(*Rev. Stat.*, § 1520.) Four years at the Naval Academy and two years at sea, at the expiration of which time the cadet returns to the Academy for final graduation, and the district then becomes vacant.

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the naval cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. *At least* fifteen appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for naval cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the 5th of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the 1st day of July of that year; but if it is not made by that time the Secretary of the Navy shall fill the vacancy by appointment of an actual resident of the district in which the vacancy exists, who shall have been for at least two years immediately preceding the date of his appointment an actual and bona fide resident of the district in which the vacancy exists and of the legal qualification under the law as now provided. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. *And all candidates must, at the time of their examination for admission, be between the ages of* fifteen and twenty years and physically sound, well-formed, and of robust constitution.*"—(*Rev. Stat.*, § 1517.)

* Act 2d March, 1889.

VII. Candidates who may be nominated in time to enable them to reach the Academy by the 15th of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examination.

No leave of absence will be granted to cadets of the fourth class.

EXAMINATION.

VIII. *"All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the board of examiners."*—(*Rev. Stat.*, § 1515.)

IX. *"When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."*—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy at the Naval Academy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz:

- Feeble constitution, inherited or acquired;
- Retarded development;
- Impaired general health;
- Decided cachexia, diathesis, or predisposition;
- Any disease, deformity, or result of injury that would impair efficiency, such as—
- Weak or disordered intellect;
- Cutaneous or communicable disease;
- Unnatural curvature of spine, torticollis, or other deformity;
- Inefficiency of either of the extremities or large articulations from any cause;
- Epilepsy or other convulsions within five years;
- Impaired vision, disease of the organs of vision, imperfect color sense; visual acuteness must not fall below fifteen-twentieths of the normal in either eye;
- Impaired hearing or disease of the ear;
- Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
- Impediment of speech to such an extent as to impair efficiency in the performance of duty;
- Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
- Hernia, complete or incomplete, or undescended testis;
- Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
- Disease of the genito-urinary organs;
- Chronic ulcers, ingrowing nails, large bunions, or other deformity of feet;
- Loss of many teeth, or teeth generally unsound.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection.

The feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, whether abstract or concrete, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude, and *vice versa*.

To define prime and composite numbers; to give the test of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed, *e. g.*:

"They were always a strange family: they rarely acted like other people: their hearts were in the right place, but their heads always seemed to be doing anything but what they ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words: thus—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected, thus—

1. *Describe the sources from which our knowledge of these events are derived.*
2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they flow; the position of important seas, bays, gulfs, and arms of the sea; the position of independent States, their boundaries and capital cities; the position and direction of great peninsulas, and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and of colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bays of water on which cities are situated; the course of a vessel in making a voyage between well-known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other States, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both; questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were these colonies united? What did the colony of *Pennsylvania* include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the United States, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz:

One dress jacket.....	\$19.50	One jackknife.....	\$0.75
One blouse.....	11.75	Six sheets.....	3.45
Two pairs trousers.....	21.00	Hammock clews.....	.50
Three working suits.....	2.85	One pair of bathing trunks.....	.20
One overcoat.....	22.50	Three pairs white thread gloves.....	.54
One rubber coat.....	4.00	Two black silk neckties.....	.46
One rubber hat.....	.60	Two clothes bags.....	.42
Two pairs of regulation leggins.....	1.50	One hammock mattress.....	3.00
Two parade caps.....	5.90	a One requisition book.....	.30
One knit cap.....	.68	a One pass book.....	.30
One mug.....	.18	a Stencil, ink, and brush.....	.48
One soap box.....	.68	a One bottle of indelible ink.....	.18
One laundry book.....	.25	a One wash basin and pitcher....	.90
One pair of blankets.....	2.50	a One pair of gymnasium slippers	1.12
Two pairs of high shoes.....	8.50	* One whisk.....	.15
One pair of overshoes.....	.72	* One coarse comb.....	.21
Eight white shirts.....	4.40	* One cake of soap.....	.10
Twelve linen collars.....	1.50	* One hairbrush.....	.55
Eight pairs of cuffs.....	1.76	* Stationery.....	.50
* Eight pairs of socks.....	2.00	* Twelve white handkerchiefs....	2.40
* Eight towels.....	2.00	* One pair of suspenders.....	.40
* Shaving outfit.....	1.65	* Four suits pajamas.....	6.00
* Four pairs of drawers (winter) ..	5.00	* One toothbrush.....	.20
b Four pairs of drawers (summer) ..	3.00	* Thread and needles.....	.19
* Four undershirts (winter).....	5.00	* Blacking brush and blacking....	.65
b Four undershirts (summer).....	3.00	* Nailbrush.....	.30
One hand glass.....	.36	Six pillow cases.....	1.50
Four woolen shirts.....	7.40	One black silk neckerchief.....	.60
One sweater.....	2.38	Name plate.....	.30
Three white hats.....	1.20	Two white blouses.....	4.00
One reefer.....	9.00		
			80.55
	152.66		

ADMISSION OF CANDIDATES.

When moving into cadet quarters, cadets will supply themselves with the following articles, viz:

a Two bedspreads	\$2.20	One mirror.....	\$1.10
a Two pairs of drill gloves.....	1.00	a One rug.....	1.00
a One slop jar.....	.95	a One hair mattress.....	5.35
a Two spatter cloths.....	.80	a One broom.....	.30
One hair pillow .....	.80		
	<hr/>		<hr/>
	5.75		7.64

Articles marked *a* will not be taken on board the practice ship.
Of the articles marked *b*, cadets entering in September must have four each.
The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.
Each naval cadet must, on admission, deposit with the pay officer the sum of \$30, for which he will be credited on the books of that officer, to be expended by direction of the Superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.
All deposits for clothing and the entrance deposit of \$30 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$196.64
Deposit for books, etc.....	30.00
	<hr/>
Total amount required.....	\$226.64

The value of clothing brought from home is to be deducted from this amount.
Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MATHEMATICS	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution; arithmetical, geometrical, and harmonical progression.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra. Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
ENGLISH	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
LANGUAGES	5	4	FRENCH: "Natural Method"	Chardenal's Complete French Course. Bercy's La Langue Française. Marion's Le Verbe en quatre Tableaux Synoptiques. Termes Nautiques, Pournain. Bellow's Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MATHEMATICS.....	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; theory of probability; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations; determinants.	Hall and Knight: Higher Algebra. Bowditch's Useful Tables.
	3	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry.
ENGLISH	3	4	ENGLISH: Words, sentences, and paragraphs; exercises in the composition of letters and telegrams. Themes.	A. R. Hill's Foundations of Rhetoric. Boehler's Practical Exercises in English. Webster's Dictionary.
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States by notes or lectures.	Eliot's History of the United States. Mitchell's Atlas.
LANGUAGES.....	3	4	FRENCH: "Natural Method." SPANISH: "Natural Method." (Given as an advanced course.)	Bercy's La Langue Française, 1 ^{re} partie. Marion. Le Verbe. Bercy's French Reader. Worman's First Spanish Book. Knapp's Spanish Grammar. Seane's Dictionary.

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MATHEMATICS	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections, representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order; projections of the sphere.	Church's Descriptive Geometry. Rittenhouse's Exercises in Descriptive Geometry Drawing.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry. Levett and Davison's Plane Trigonometry. Bowditch's Useful Tables.
ENGLISH	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	A. S. Hill's Principles of Rhetoric. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
LANGUAGES.....	3	4	FRENCH: "Natural Method." SPANISH: "Natural Method." (Given as an advanced course.)	Modern French Plays. Bercy's French Reader. Jurien de la Gravière's Guerres Maritimes. Knapp's Spanish Grammar. Knapp's Spanish Reader.

COURSE OF INSTRUCTION.

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
DRAWING	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Fausse's Mechanical Drawing. Rittenhouse's Exercises in Descriptive Geometry Drawing

SECOND TERM.

PHYSICS.....	4	4	<p>PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniell's Principles of Physics. Practical Physics, by Stewart and Gee</p> <p>Renevier's General Chemistry. Lecture Notes</p>
MATHEMATICS	8	4	<p>Stereographic Projections and Solutions of the "Astronomical Triangle."</p> <p>ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of coordinates; properties of the conic sections; equations to tangents and normals; determination of loci, discussion of the general equation of the second degree</p>	<p>Hendrickson and Dressel's Stereographic Projections.</p> <p>C. Smith's Conic Sections.</p>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
ENGLISH	2	4	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People. Abbott's How to Write Clearly. Buehler's Practical Exercises in English.* Webster's Dictionary.*
LANGUAGES.....	2	4	FRENCH: Course of the first term continued. SPANISH: Course of the first term continued.	Same as for the first term.
DRAWING	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; drawing screws, bolts, nuts, and gearing; round writing.	Faunce's Mechanical Drawing.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP	1	4	SEAMANSHIP: Use of the compass, lead, and log; signals; blocks and tackles; running rigging; description and use of sails and their fittings; purchasing weights; boats and their management; ground tackle; handling anchors; handling sails; port drills and evolutions; management under sail; duties of naval cadets; rules of the road.	Lucas's Seamanship. Department circulars.
STEAM ENGINEERING.	3	4	PRINCIPLES OF MECHANISM: Conversion of circular into reciprocating motion; link work; conversion of reciprocating into circular motion; the teeth of wheels; the use of wheels in trains; aggregate motion; truth of surface and the power of measurement; miscellaneous contrivances.	Goodeve's Elements of Mechanism. Gow's Notes and Problems in Elementary Mechanism.
MECHANICS	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centers of gravity; moments of inertia; planimeters; rules for approximate determination of the areas and volumes.	Johnson's Integral Calculus.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
PHYSICS.....	4	4	<p>PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography.</p> <p>CHEMISTRY: Short course in chemical analysis.</p>	<p>Daniell's Principles of Physica. Ganot's Physica. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrausch's Physical Measurements. Lecture Notes.</p> <p>Stoddard's Outline of Qualitative Analysis for Beginners.</p>
ENGLISH	1	4	HISTORY: The history of the United States Navy.	Maclay's History of the United States Navy.
LANGUAGES.....	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Jurien de la Gravière's Guerres Maritimes.
DRAWING	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings. Topographical and isometrical drawing exercises.	Tomkin's Machine Construction.* Faunce's Mechanical Drawing.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	1	4	Course of the first term continued ..	Same as for the first term.
NAVIGATION.....	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coördinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac. Dead reckoning and "day's work."	White's Astronomy Bowditch's Navigator American Ephemeris and Nautical Almanac.
STEAM ENGINEERING.	3	4	MARINE ENGINES: Early history and progress of marine engineering; work and efficiency; nature and properties of heat; application of heat to water; combustion of coal and economy of fuel; arrangement and efficiency of boilers; fitting, and mountings of boilers; corrosion and preservation of boilers; efficiency of the steam; methods of increasing the expansive efficiency of steam; compound engines; condensation of steam; regulating and expansion valves and gear; slide valves and fittings; starting and reversing gears; cylinders and their fittings; condensers and fittings; rotatory motion; details of compound and triple-expansion engines; propulsion; screw propellers; the indicator and indicator diagrams; auxiliary machinery and fittings.	Sennett's Marine Steam Engine. Marine Engines: Problems, Notes, and Sketches. 1894.

THIRD YEAR—SECOND CLASS—Continued.
SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MECHANICS.....	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Ziwet's Mechanics. Bowser's; Hydromechanics.
PHYSICS.....	4	4	PHYSICS: Recitations in light and heat concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as for the first term. Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements.* Lecture Notes.
ENGLISH	1	4	HISTORY: The history of the United States Navy.	Maclay's History of the United States Navy.
LANGUAGES.....	1	4	FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	French newspapers.

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	3	4	<p>SEAMANSHIP: Stowage and organization; boats and their management; ground tackle; handling anchors; handling sails; management under sail and under steam; turning and maneuvering; wharfing, docking, towing, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; use of sounding machine.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship; section and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamanship Department Circulars Navy Regulations.</p> <p>Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture Welch's Text-book of Naval Architecture.</p> <p>Navy and International Signal Books. Fleet Drill Book (Navy Department).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
ORDNANCE.....	8	4	<p>INSTRUCTIONS FOR INFANTRY AND ARTILLERY: Schools of the squad, company, battalion, and brigade, in close and extended orders; street-riot drill; ceremonies.</p> <p>GUNNERY DRILL: Distribution of the crew to the guns and other stations; duties of officers and men; drill of guns of the main and secondary batteries.</p> <p>GUNS AND GUN MOUNTS: Metals used in their construction; description and manufacture of service guns and their mounts for main and secondary batteries; nomenclature, care, and preservation of the ordnance outfit.</p>	<p>Instructions for Infantry and Artillery, United States Navy.</p> <p>Gunnery Drill Book for the New Armaments.</p> <p>Text-book of Ordnance and Gunnery. Descriptions of Modern Ordnance and Modern Gun Mounts.</p>
NAVIGATION.....	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurements of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Chauvenet's Spherical and Practical Astronomy.* Walker's Navigation. Bowditch's Navigator. American Ephemeris and Nautical Almanac.</p> <p>Phelps's Practical Marine Surveying. Projection Tables. Craig's Azimuth.*</p>

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MECHANICS	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Strength of materials; elasticity; stress and strain; theory of structures; strength and deflection of beams; beams of uniform resistance.	Cotterill and Shaler's Lesson in Applied Mechanics. Cotterill's Applied Mechanics.
PHYSICS	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric-light wires; experiments upon induction; practice in photography and micro-photography.	Same as for the second class year. Thompson's Dynamo-Electric Machinery Lecture Notes.

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	4	4	Course of the first term continued...	Same as for the first term.
ORDNANCE.....	5	4	<p>BALLISTICS: The laws of combustion of gunpowder; velocities and pressures in guns; rifling, effect on pressure; the motion of projectiles in a non-resisting medium and in air; computation and use of ballistic and range tables; accuracy and probability of fire; derivation of rules for correcting the errors which occur in gunnery practice; the penetration and effect of projectiles.</p> <p>GUNS: Computation of their elastic strength and shrinkage.</p> <p>AMMUNITION: Its description, preparation, supply, stowage, and use.</p> <p>ARMOR: Description of; use of armor and other protection of matériel and personnel.</p> <p>TORPEDOES: Their description and use.</p>	<p>Interior and Exterior Ballistics.</p> <p>Accuracy and Probability of Fire.</p> <p>Ordnance Notes.</p> <p>The Elastic Strength of Guns.</p> <p>Text-book of Ordnance and Gunnery.</p>
NAVIGATION.....	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling errors.</p> <p>PRACTICAL NAVIGATION.</p> <p>PRACTICAL SURVEYING.</p>	<p>Admiralty Manual for the Deviations of the Compass.</p> <p>Diehl's Practical Problems and the Compensation of the Compass in the United States Navy.*</p>

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
ENGLISH	2	4	INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retorsion; blockade; contraband of war; right of search; ship's papers and nationality; prizes; privateering; piracy; the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.	Woolsey's International Law.
	1	4	SPECIAL INSTRUCTIONS: General description of the human body and its functions; the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction Fridays, 7:30 to 9:30 p. m., additional.)	Martin's The Human Body and the Effects of Narcotics.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	2	4	NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc.	Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture. Welch's Text-book of Naval Architecture.
STEAM ENGINEERING.	3	4	MARINE ENGINES: Horse-power, nominal and indicated, and the efficiency of the engine; resistance of ships and indicated horse-power necessary for speed: space occupied by, and general description of, modern marine machinery; engines, simple and compound; expansion of steam, mean pressure, etc.; piston speed, stroke of piston, revolutions, size of cylinder, cylinder fittings, etc.; the piston, piston-rod, connecting-rod; shafting, cranks, and crank shafts, etc.; foundations, bed-plates, columns, guides, and framing; the condenser, pumps; valves and valve gear; valve diagrams, etc.; propellers; sea cocks and valves; fitting in of machinery, starting and reversing of engines; materials used by the marine engineer.	Seaton's Marine Engineering.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
STEAM ENGINEERING—Continued.	2	4	BOILERS: Fuel, etc., evaporation; proportions; water-tube boilers; boiler details; mountings and fittings; wear and tear; repairs; performance; corrosion; determining the heating value of fuels; forced and natural draught and resistances; measurement of heat produced and wasted; analysis of waste gases; strength of boiler material; design; construction; board of trade rules; management; liquid fuel.	Sen-ton's Marine Engi-neering. Stromeyer's Marine Boiler Management and Construction.
	3	4	DESIGNING MACHINERY: Materials used in machine construction; straining actions to which machines are subjected; resistance of structures to different kinds of straining action; fastenings, riveted joints, bolts, nuts, keys, and cotters; pipes and cylinders; journals, pivots, axles, and shafting; crank-shaft design; practical designing of various parts of machines.	Unwin's Elements of Machine Design—Parts I and II.
MECHANICS	3	4	Same as for the line division	Same as for the line division.
PHYSICS	3	4	Same as for the line division	Same as for the line division.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	2	4	Course of the first term continued.	Same as for the first term.
STEAM ENGINEERING.	3	4	MARINE ENGINES: Physical properties of steam; convertibility of heat and work, internal work; theory of the steam engine; characteristics of a perfect gas; completely superheated steam; thermodynamics of a perfect gas; theory of a heat engine working with a perfect gas; absolute scale of temperatures; performance of a perfect-heat engine; perfect steam engine; generation and expansion of steam; Carnot's principle; comparison of steam and air engines; adiabatic equation; adiabatic curves; nature of the process of expansion; area of the diagram of energy, mean temperature of supply; entropy; temperature entropy diagram; thermal indicator diagram; entropy of air and steam; losses of efficiency in heat engines; clearance and wire-drawing; feed-water heaters; utilization of low temperatures; formulae connecting the pressure and temperature of saturated steam; dilatation and specific heat of water; geometry of the curve $PV^n = \text{Constant}$. Casting and moulding; pattern making and casting design; smithing and forging; boiler making and plate work; laying off machine work; erecting machinery; metals and alloys.	Cotterill's Steam Engine Considered as a Thermodynamic Machine. Lineham's Mechanical Engineering, Part I.
	3	4	BOILERS: Designing and drawing ...	Same as for the first term, with notes.
	4	4	DESIGNING MACHINERY: Designing and drawing.	Same as for the first term, with notes.

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects	Text-books.
STEAM ENGINEERING—Continued.	3	4	EXPERIMENTAL ENGINEERING: Object of engineering experiment; classification of experiment; errors—probability, classification, and rejection; graphical representation of experiments; autographic diagrams; apparatus; testing machines; methods of testing materials of construction; friction testing of lubricants; measurement of power; measurements by meters; flow of steam; gas meters; anemometers; tests of pumps; measurement of pressure; measurement of temperature; measurement of moisture in steam; methods of testing steam boilers; the indicator and the indicator diagram; methods of testing steam engines; experimental determination of inertia; the injector and pulsometer; valve diagrams; refrigerating machinery; standardizing indicators and instruments of precision; dynamometric tests of propellers, etc.	Carpenter's Experimental Engineering.
	1	1	SPECIAL INSTRUCTION: Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship.....					1	1	3	4	2	2
Ordnance.....							3	5		
Navigation.....						2	4	4		
Steam Engineering.....					3	3			8	13
Mechanics.....					5	4½	3		3	
Physics.....				4F	4	4	3		3	
Mathematics.....	6	5	5	5						
English.....	5	5	4	2	1	1		2		
Languages.....	5	5½	3	2	1F	1F				
Drawing.....			4	2½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics.....		½ F		½ F
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PROGRAMME OF RECITATIONS.

FIRST TERM.

Department	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Seamanship			M. (3)	T. W. Th. (3)	T. W. (3)
Ordnance				T. Th. (2), F. (3)	
Navigation				M. (3), W. F. S. (1)	
Steam Engineering			W. Th. F. (3)		{ W. F. S. (1), T. Th. (2), M. Th. F. (3).
Mechanics			M. T. W. F. (1), Th. (2)	M. W. F. (2)	M. W. F. (2)
Physics			M. T. W. F. (3)	M. T. Th. (1)	M. T. Th. (1)
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
English	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)	Th. (1)		
Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	F. (7:30 to 9:30 p.m.) ^o		
Drawing		M. W. Th. F. (3)	T. (3), S. (1)		

SECOND TERM.

Seamanship			W. (3)	M. T. W. Th. (3)	W. Th. (3)
Ordnance				M. T. Th. (3), W. (1), F. (3)	
Navigation			M. T. (3)	M. T. Th. F. (1)	
Steam Engineering			W. Th. F. (3)		{ M. T. W. Th. F. (1), M. T. W. Th. F. (2), M. T. F. (3).
Mechanics			M. W. Th. F. S. (1)†		
Physics		{ M. T. W. F. (3), F. (7:30 to 9:30 p.m.) ^o	M. Th. F. (2), T. (1)		
Mathematics	M. T. W. Th. F. (2)	M. T. W. Th. F. (1)			
English	M. T. W. Th. F. (1)	M. Th. (3)		W. F. (3)	
Languages	M. T. W. Th. F. (3), 4 (1) ^o	T. W. (2)	F. (7:30 to 9:30 p.m.) ^o		
Drawing		Th. (3), F. (2), S. (1) ^o			
My. tal lo-ter-um i'hyoblogy and Hydro.				M. (1) ^o , F. (7:30 to 9:30 p.m.) ^o	M. (1) ^o , F. (7:30 to 9:30 p.m.) ^o

o l and from the motion

† Saturday journal, entered term, from January 31 to March 10

TABLE OF COEFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline:									
Conduct	3	5	7	8	8	100	100		
Efficiency	1	3	5	8	8				
<i>Seamanship.</i>									
Seamanship, Naval Construction, and Naval Tactics *			8	13	8		44	56	32
Practice Cruise				2		72			
<i>Ordnance.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery				15		60		44	
Ordnance and Gunnery									
<i>Navigation.</i>									
Astronomy, Navigation, and Surveying			8	12			12	44	
Practice Cruise				2		68			
<i>Steam Engineering.</i>									
Principles of Mechanism and Marine Engines			8					20	
Practice Cruise			2		5	40			
Marine Engines					10				72
Designing Machinery					12				36
Boilers					8				40
Experimental Engineering					5		200		
<i>Mechanics.</i>									
Differential and Integral Calculus, and Mechanics			12						
Least Squares and Strength of Materials				5	5	68	68		
<i>Physics.</i>									
Chemistry and Physics		4							
Physics			10	5	5	76	76		
<i>Mathematics.</i>									
Algebra and Geometry	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry		10				60	60		
<i>English.</i>									
English and History	5		2						
English and Law		5					48		
International Law				4		64		24	
<i>Languages.</i>									
French, and Spanish	5	5	2			48	48	28	28
<i>Drawing.</i>									
Mechanical Drawing		6	3			36	36		
<i>Miscellaneous.</i>									
Special Instructions (Physiology and Hygiene)				2	2	8	8		
Cruise Report								16	16
Navigation Note Book,† Journals, and Station Bills								8	16
Maxima for each class	76	152	228	304	304	760	760	240	240

* Seamanship and Naval Tactics for line division alone.
† In making up the standing for a year the second term is given double the weight of the first term.
‡ Navigation note-books for line division alone.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, unbracing, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signalling; Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE.

Infantry, schools of the squad, company, and battalion, in close and extended orders; artillery, schools of the battery and battalion; exercise and target practice with small arms and guns of main and secondary batteries; exercise with cut and thrust, smallsword, and broadsword; handling and firing torpedoes, use of Riehl's and Rodman testing machines; determinations of velocities; experimental determination of range tables, also of the jump and drift; the preparation, inspection, care and preservation of ordnance material.

Six medals are awarded annually for marksmanship: Gold, silver, and bronze medals to the cadets of the first class, as first, second, and third prizes, respectively for excellence in rapid-fire gun practice; and gold, silver, and bronze medals to the cadets of the second class, as first, second, and third prizes, for excellence in practice with the service rifle and revolver.

In May, 1896, the medals for rapid-fire gun practice were awarded as follows:

Gold medal to Cadet C. M. Tozer.

Silver medal to Cadet D. M. Wood.

Bronze medal to Cadet T. T. Craven.

The medals for small-arm marksmanship for 1896 were awarded as follows:

Gold medal to Cadet J. J. Brown.

Silver medal to Cadet T. L. Johnson.

Bronze medal to Cadet J. A. Hand.

At the competitive company drill on June 8, 1896, the battalion colors were awarded to the First Company—Cadet-Lieutenant T. T. Craven, commanding—being the best-drilled company.

NAVIGATION.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying and constructing a chart of a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations at the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact coefficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Shop work: The Pattern Shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining, etc., to finished pattern work.

The Foundry: Iron and brass casting; the making of bronzes, alloys, etc.

The Blacksmith Shop: Forging, welding, etc.; tempering, case hardening, etc.; bending and quenching tests of metals.

The Boiler Shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The Machine Shop: Vise bench work; machine tool work; including the setting of work; turning; planing; boring; slotting, etc.; pipe fitting; building, erection, and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Ship work: Management of main and auxiliary engines; getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water-tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while maneuvering at sea; determining the condition and locating defects in machinery while in motion; causes and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under banked fires; coming to anchor; overhauling machinery; cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary Casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burnt grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Miscellaneous: Use of slide rule, averaging machine, apparatus for testing oils and smoke gases; standardizing steam gauges and indicators; preparing specifications for purchase of machinery and stores; testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

[When more than one kind of exercise is prescribed during a week, the number of each exercise is indicated by a figure in parentheses.]

FIRST CLASS.

Academic month.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	8	Company.	Target, great guns (4). Seamanship (1).	Artillery.	Steam tactics (4). Seamanship (1).
	10	Artillery.	Steam tactics (4). Battery drill (1).	Company.	Target, great guns (4). Battery drill (1).
	17	Target, great guns (4). Seamanship (1).	Company.	Steam tactics (4). Seamanship (1).	Artillery.
	24	Steam tactics (4). Battery drill (1).	Artillery.	Target, great guns (4). Battery drill (1).	Company.
	31	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
Nov..	7	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	21	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.	28	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	5	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	12	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	19	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
	26	No drills. [See note.]			
1897					
Jan..	2	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	9	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	16	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	23	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
	30	Semi-annual examination. [No drills.]			
Feb	6	Steam.	Seamanship.	Practical electricity.	Sword exercise.
	13	Practical electricity.	Sword exercise.	Steam.	Seamanship.
	20	Seamanship.	Steam.	Sword exercise.	Practical electricity.
	27	Sword exercise.	Practical electricity.	Seamanship.	Steam.
Mar	6	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	13	Target, great guns (4). Battery drill (1). Boats (1).	Steam tactics (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Torpedoes (4). Seamanship (1). Boats (1).

FIRST CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Mar..	20	Skirmish (4). Seamanship (1). Boats (1).	Torpedoes (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).
	27	Steam tactics (4). Seamanship (1). Boats (1).	Target, great guns (4). Battery drill (1). Boats (1).	Torpedoes (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr..	3	Torpedoes (4). Landing party (1). Boats (1).	Skirmish (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).
	10	Steam tactics (4). Landing party (1). Seamanship (1).	Steam tactics (4). Seamanship (2).	Steam tactics (4). Landing party (1). Seamanship (1).	Steam tactics (4). Seamanship (2).
	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May..	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).
	15	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S. 22	Battle drill.	Battle drill.	Battle drill.	Battle drill.
May..	29	Annual examination. [No drills.]			
June..	4	Drills for Board of Visitors, as per orders.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month. Cadets of the Engineer Division of the first class will take part in drills on board the practice ship when underway, in "Practical electricity," in "General steam tactics," and at "Fire quarters." At other times they will have "Steam drill."

SECOND CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1898					
Oct...	3	Company.	Target, machine guns (4). Seamanship (1).	Artillery.	Steam tactics (4). Seamanship (1).
	10	Artillery.	Steam tactics (4). Battery drill (1).	Company.	Target, machine guns (4). Battery drill (1).

SECOND CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	17	Target, machine guns (4). Seamanship (1).	Company.	Steam tactics (4). Seamanship (1).	Artillery
	24	Steam tactics (4). Battery drill (1). Battalion infantry.	Artillery.	Target, machine gun (4). Battery drill (1). Battalion infantry	Company.
Nov.	7	Seamanship.	Seamanship.	Seamanship.	Seamanship
	14	Seamanship	Seamanship.	Seamanship.	Seamanship
	21	Battalion artillery.	Battalion artillery.	Battalion artillery	Battalion artillery
	28	Steam.	Signals (3). Seamanship (2)	Steam.	Sword exercise
Dec...	5	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	12	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam
	19	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
	26	No drills. [See note.]			
1897					
Jan.	2	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	9	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	16	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam
	23	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam
	30	Semi-annual examination. [No drills.]			
Feb.	6	Steam.	Practical ordnance	Steam.	Sword exercise
	13	Steam.	Sword exercise.	Steam.	Practical ordnance
	20	Practical ordnance	Steam.	Sword exercise.	Steam
	27	Sword exercise.	Steam.	Practical ordnance	Steam.
Mar.	6	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	13	Target, great guns (4). Battery drill (1). Boats (1).	Steam tactics (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).
	20	Skirmish (4). Seamanship (1). Boats (1).	Target, small arms (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).
	27	Steam tactics (4). Seamanship (1). Boats (1).	Target, great guns (4). Battery drill (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr.	3	Target, small arms (4). Landing party (1). Boats (1).	Skirmish (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).
	10	Seamanship (3). Landing party (1).	Seamanship.	Seamanship (3). Landing party (1).	Seamanship

SECOND CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Apr ..	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5) Seamanship (1).	Seamanship.
May ..	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	15	Battalion infantry(5) Seamanship (1).	Battalion infantry(5) Seamanship (1).	Battalion infantry(5) Seamanship (1).	Battalion infantry(5) Seamanship
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S. 22	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	29	Annual examination. [No drills.]			
June .	4	Drill for Board of Visitors, as per orders.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

THIRD CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1898					
Oct...	3	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship (1).
	10	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1.)
	17	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	24	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
	31	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
Nov ..	7	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	21	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	28	Steam.	Seamanship.	Target,small arms(3) Great guns (2).	Sword exercise,
Dec ..	5	Target,smallarms(3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	12	Seamanship.	Steam.	Sword exercise.	Target,smallarms(3) Great guns (2).
	19	Sword exercise.	Target,small arms(3) Great guns (2).	Seamanship.	Steam.
	26	No drills. [See note.]			

THIRD CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Jan...	2	Steam.	Seamanship.	Target, small arms (2).	Sword exercise.
	9	Target, small arms (2).	Sword exercise.	Great guns (2).	Seamanship.
	16	Seamanship.	Steam.	Sword exercise.	Target, small arms (2).
	23	Sword exercise.	Target, small arms (2).	Seamanship.	Great guns (2).
	30	Semi-annual examination. [No drills.]			
Feb...	6	Steam.	Signals (2).	Target, small arms (2).	Sword exercise.
	13	Target, small arms (2).	Seamanship (2).	Great guns (2).	Signals (2).
	20	Signals (2).	Sword exercise.	Steam.	Seamanship (2).
	27	Seamanship (2).	Steam.	Sword exercise.	Target, small arms (2).
Mar...	6	Sword exercise.	Target, small arms (2).	Signals (2).	Great guns (2).
	13	Battalion artillery (4).	Great guns (2).	Seamanship (2).	Steam.
	20	Seamanship (1).	Battalion artillery (4).	Battalion artillery (4).	Battalion artillery (4).
	27	Target, small arms (4).	Seamanship (1).	Seamanship (1).	Seamanship (1).
		Battery drill (1).	Seamanship (5).	Skirmish (4).	Boats (4).
		Boats (1).	Boats (1).	Battery drill (1).	Seamanship (1).
		Boats (1).	Boats (1).	Boats (1).	Boats (1).
		Skirmish (4).	Boats (5).	Target, small arms (4).	Seamanship (4).
		Seamanship (1).	Landing party (1).	Seamanship (1).	Landing party (1).
		Boats (1).		Boats (1).	Boats (1).
		Seamanship (5).	Target, small arms (1).	Boats (5).	Skirmish (4).
		Boats (1).	Battery drill (1).	Seamanship (1).	Battery drill (1).
			Boats (1).		Boats (1).
Apr...	3	Boats (5).	Skirmish (4).	Seamanship (4).	Target, small arms (4).
		Landing party (1).	Seamanship (1).	Landing party (1).	Seamanship (1).
			Boats (1).	Boats (1).	Boats (1).
	10	Seamanship (5).	Seamanship.	Seamanship (5).	Seamanship.
		Landing party (1).		Landing party (1).	
	17	Seamanship.	Battery drill (5).	Seamanship.	Battery drill (5).
			Seamanship (1).		Seamanship (1).
	24	Battery drill (5).	Seamanship.	Battery drill (5).	Seamanship.
		Seamanship (1).		Seamanship (1).	
May	1	Seamanship.	Seamanship (5).	Seamanship.	Seamanship (5).
			Landing party (1).		Landing party (1).
	8	Company (4).	Company (4).	Company (4).	Company (4).
		Seamanship (2).	Seamanship (2).	Seamanship (2).	Seamanship (2).
	15	Battalion infantry (5).	Battalion infantry (5).	Battalion infantry (5).	Battalion infantry (5).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.

THIRD CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897 May..	W. Th. F. S. 22	Seamanship. Boats. Battalion infantry. Battle drill.	Seamanship. Boats. Battalion infantry. Battle drill.	Seamanship. Boats. Battalion infantry. Battle drill.	Seamanship. Boats. Battalion infantry. Battle drill.
May.. June..	29 4	Annual examination. [No drills.] Drills for Board of Visitors, as per orders.			
June 10 to Aug. 28.	} ---	Practice cruise.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

FOURTH CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896 Oct...	3 10 17 24 31	Company. Artillery. Boats (4). Seamanship (1). Boats (4). Battery drill (1).	Boats (4). Seamanship (1). Boats (4). Battery drill (1). Company. Artillery.	Artillery. Company. Boats (4). Seamanship (1). Boats (4). Battery drill (1).	Boats (4). Seamanship (1). Boats (4). Battery drill (1). Artillery. Company.
Nov..	7 14 21 28	Battalion infantry. Seamanship. Seamanship. Battalion artillery.	Battalion infantry. Seamanship. Seamanship. Battalion artillery.	Battalion infantry. Seamanship. Seamanship. Battalion artillery.	Battalion infantry. Seamanship. Seamanship. Battalion artillery.
Dec..	5 12 19	Gymnastics. Dancing (3). Seamanship (2). Dancing (3). Seamanship (2).	Dancing (3). Seamanship (2). Gymnastics. Gymnastics.	Gymnastics. Dancing (3). Seamanship (2). Dancing (3). Seamanship (2).	Dancing (3). Seamanship (2). Gymnastics. Gymnastics.
	26	No drills. [See note.]			
1897 Jan...	2 9 16	Gymnastics. Gymnastics. Dancing (3). Seamanship (2).	Dancing (3). Seamanship (2). Dancing (3). Seamanship (2). Gymnastics.	Gymnastics. Gymnastics. Dancing (3). Seamanship (2). Dancing (3). Seamanship (2).	Dancing (3). Seamanship (2). Dancing (3). Seamanship (2). Gymnastics.

FOURTH CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Jan..	28	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	30	Semi-annual examination. [No drills].			
Feb.	6	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).
	13	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).
	20	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.
	27	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Mar.	6	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	13	Gymnastics (4). Battery drill (1). Boats (1).	Seamanship (5). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).
	20	Skirmish (4). Seamanship (1). Boats (1).	Boats (5). Landing party (1).	Gymnastics (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).
	27	Seamanship (5). Boats (1).	Gymnastics (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr..	3	Boats (5). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Gymnastics (4). Seamanship (1). Boats (1).
	10	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	15	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Battle drill.	Battle drill.	Battle drill.	Battle drill.
May	29	Annual examination. [No drills.]			
June	6	Drills for Board of Visitors, as per orders.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

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